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James A. Michener on Animals, Especially the Rattlesnake in *Recessional*

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(1)

James Michener is our favorite writer, having provided us with thousands of hours of enjoyment and illumination. Perhaps because we regard him as a sort of dear friend with whom we have "communicated" so often and on so many topics, we feel some justification in taking up a small, objectionable issue that has threaded its way through his books; namely, his tendency toward gratuitous anthropomorphism in the treatment of animals. Several points should be stated in advance of our objections in order to create a proper context for them. First, we read Mr. Michener's books mainly to learn about human history and cultures and to savor the anthropological issues he raises, including the controversial ones, to which Mr. Michener typically brings special insights. Although he has a fondness for animals and considerable knowledge of them, he has never claimed to be a natural historian. Hence, criticism along these lines ought to be offered with care, as we are striking at a small part of his corpus, much as if we were considering the zoological references in Shakespeare's corpus. Second, most of the factual material Mr. Michener brings into his discussions of animals is reasonable, even unassailable, as when he treats paleontological, geographic and ecological topics. Even his descriptions of animal behavior are typically unarguable, except for infrequent and relatively minor inaccuracies, as when the rattlesnake in *Recessional* (p. 270) " . . . heard coming from the birds' breeding place unusual sounds, perhaps of young begging for food." Rattlesnakes and probably all other snakes are almost certainly deaf to airborne vibrations. Later in the same text (p. 272) there is another glitch:

> And, strangest of all, he had been constructed by the forces that devised him with a serious impediment: He could not strike without first sending a loud, clear warning from the rattles in his tail. The sequence was invariable: stop, coil, signal noisily, then strike.

This sequence, with slight modification, is fairly common in defensive encounters, although there are some important exceptions (Duvall et al., 1985; Prior and Weatherhead, 1994; see also Alcock, 1993, p. 383, fig. 27). Feeding episodes often take this form in captive rattlesnakes, but if the prey is presented without a human or other threatening object in the vicinity, lo and behold, the snakes give no warning before they strike their prey.

Errors such as these are not abundant in Mr. Michener's books, and he more than compensates for them by other passages where he brings in ideas of creative merit that likely will stand up to scientific tests. Therefore, in the following material it should be understood that we are offering hard criticism on one theme from a constellation of themes that is, on balance, truly stellar.

(2)

Gratuitous anthropomorphism is the attribution to animals of human mental and emotional processes, often without reflection or reservation, when there is no evidence to support the attribution and especially when there may be evidence to the contrary. Gratuitous anthropomorphism should be contrasted with critical anthropomorphism, a framework for arriving at testable hypotheses about mental processes mediating animal behavior (Burghardt, 1985, 1991). Like Burghardt and other authors in Ristau's *Cognitive ethology: The Minds of Other Animals*, we are not hostile to the scientific study of mental or affective processes in animals; indeed we consider this to be one of the great frontiers of modern science (Griffin, 1976, 1984). Yet we worry a lot about the debilitating effect on many people of the intellectual diet they have consumed since birth, laced heavily with gratuitous (uncritical) anthropomorphism and seasoned with a worse sin, called Lassieism, in which television animals are posed not only to suggest human-like qualities but to persuade children that high mental and affective processes constitute the only explanation for the profound accomplishments of these animals. Lassie is a fraud, albeit a magnificent one, and DC's daughter will probably never forgive him for saying so. It is no wonder that young people exposed to so much anthropomorphism, whether the unintentional variety arising from the linguistic carelessness of adults or the malicious variety represented by Lassie, have great difficulty expunging these now-habitual tendencies from their utterances when a teacher points out that uncritical anthropomorphism is tantamount to creating arguments filled with questionable or downright untenable assumptions.

(3)

How does Mr. Michener fit into this picture? Well, although he engages in no Lassieism, he lapses often into gratuitous anthropomorphism in most—but not all—of his animal scenes, especially the lengthy ones. Writing in *Recessional* about the overlong eastern diamondback, he (or the narrator) tells us the following things, beginning on pages 269-275 and continuing on page 479. We emphasize the anthropomorphic claims with italics.

> Rattler was *infuriated*.
>
> Social progress had caught up with the great rattlesnake, and he did not *approve*.
>
> For the present he refrained from going out to seek food; he *realized* that if he was exposed to the burning rays of the sun for any considerable period, he would perish. *Had he a voice he would have howled in frustration*; instead he coiled himself into his combative position and prepared to take action, but what specifically he might do he did not *know*.
>
> [Speaking of the rattlesnake sensing an enticing opportunity at a heron rookery, the narrator says:] "Normally the birds would

have eaten the fish right after catching them; if they were bringing them inland it must be to feed their newly hatched young." [There is nothing wrong with this inference, provided that a human was doing the observing and the inferring; but to imply that a rattlesnake can do the same is a tad problematic.]

But now as night fell, the mother heron experienced a wave of unease. Always attentive, she *thought* she detected a slight movement amid the path of grasses that had been spared by the machines, but when she moved a short distance from the nest to investigate, she could see nothing and *concluded* that at worst it might have been a mouse, from which she had nothing to fear.

When the mother heron uttered a loud cry, her mate came rushing through the savanna grass, *aware* that disaster of some kind had struck.

She (the mother heron) had finished with the rattler, *gratified* that she had at least once sunk her powerful beak into some portion of his cold body.

Trusting that the cavern would be big enough to hide his full length, he darted into the hole and *terrified* two rabbits who were living there. Fortunately for them, the warren had another exit through which they fled, *aware that they had looked directly into the eyes of death* not six inches from them.

The herons, frustrated but *aware* of where the snake was hiding, maintained a watch over the warren. . . .

Every day the space required for the new condominiums attached to the Palms (a Florida retirement center) constricted the domain he had *terrorized* for so many decades, but, *like any astute elder statesman, he would face that problem when he had to*. In the meantime he needed sleep.

It was Rattler, who had *found the recent months most disturbing*.

The various commotions and defeats had put him in an *ill temper*, as he watched this new intrusion with hooded eyes. . . .

There is not much, if anything, wrong with these passages from the perspective of readers who do not take gratuitous anthropomorphic language seriously, and who mentally reconstruct the passages nonanthropomorphically, using ordinary descriptive statements or explanatory constructs that can be justified. The problem comes in when we consider readers who have no awareness that gratuitous anthropomorphism is an issue. For these readers, Mr. Michener's passages merely constitute yet additional reinforcement for their longstanding linguistic habits of explaining the behavior of animals with the same concepts normally used to explain human actions.

(4)

As the following quotation from *Creatures of the Kingdom* (p. XV) will show, Mr. Michener is quite familiar with the problem, although his resonance is not entirely harmonious with our perspective.

> Those of us who love animals and try to write about them accurately are often, and sometimes with reason, charged with the literary sin of the 'pathetic fallacy,' which the dictionary defines as 'the attribution of human emotions or characteristics to things or animals'. . . .
>
> I have tried, not always successfully, to avoid the pathetic fallacy when dealing with animals, but if some purist denies that the drunken hyena in the Serengeti lodge had a self-satisfied smirk on his face as he lurched off to bed, or that my dog Java evidenced a protective love for me, I cannot accept his or her censure.

We hope readers will see that censure is not our objective. Instead, we urge reconsideration of the harms and values associated with gratuitous anthropomorphism, and in this context we see a great service to be performed by nature writing that strikes a balance between the humanization of animals as a literary ploy and a more cautious treatment of animals as a pedagogical ploy. We agree with Mr. Michener that some aspects of animal behavior justify anthropomorphic interpretations, particularly when the interpretations are explicitly offered as hypotheses. But, he writes this way only occasionally. In reading his *Creatures of the Kingdom* we counted the frequency of constructions containing pathetic elements in relation to his animal characters, finding no less than 442 instances, an average of slightly more than 1.5 per page. Without question, some of these constructions are justifiable, and even hard-nosed purists will keep their mouths shut as Mr. Michener describes the magnificent dogs of *Chesapeake* and the wonderful squirrel, Genghis Khan, who reminded us of scenes from *Texas*. But 442 is a very large number, and the majority of these cases represent lost opportunities to be cautiously instructive.

(5)

Mr. Michener is quite capable of seizing opportunities to be instructive, as he demonstrates when writing about political, cultural or economic events involving human actors or about far-reaching climatological and geological phenomena. It is only with animals that he sometimes misses the mark, and then it is usually not a factual problem that kinks the passage, it's the too-human treatment of his subjects that does so. Is this really something to complain about? What harm is done by Mr. Michener, particularly when the general readership either does not understand the problem or does not care? After all, isn't the writer entitled to a certain license, when it could be argued that gratuitous anthropomorphism facilitates communication and keeps the scenes moving forward? Why should Mr. Michener be concerned by a problem that is taken seriously only by a handful of eggheads?

Here, then, is the tough part, because these questions cannot be confronted merely by taking the intellectual high ground and arguing that since eggheads have revealed the hazards associated with gratuitous anthropomorphism, Mr. Michener jolly well ought to accede to our wishes, QED. He should respond with a resounding "Baloney!" Our position is further complicated because, like Burghardt and many others, we do not deny the existence of thought and awareness in animals, instead we merely resist the temptation to claim their existence when no evidence supports such postulations. Until evidence is available, we prefer neutral language that describes animal behavior but remains noncommittal with respect to mentalistic interpretation. This position is far from the radical, anti-mentalistic behaviorism that characterized the dust bowl of American psychological empiricism, and it is easy to misunderstand. Since we are cordial to cognitive speculation arising from critical anthropomorphism (see Griffin, 1976, 1985), we might appear to verge on hypocrisy by sniping at Mr. Michener.

To drive towards a positive recommendation, we cite a particularly powerful passage from Mr. Michener's *Literary Reflections* (p. 99):

> An effective novel starts with characters, grows with them, and matures intellectually and spiritually with them. But they must be seen in their setting, engaged by the great themes of their time.

Animals can be characters, and in Mr. Michener's books they frequently become characters by virtue of the space, description and continuity he gives to them. But, how do the animal characters grow and mature beyond the physiological senses of size increase or reproductive maturation? Put another way, how do the human characters grow and mature in their understanding and appreciation of the animals that form a significant part of their worlds? We believe that Mr. Michener has not given much thought to this matter, except in a few notable cases, such as the breeding and deployment of fighting bulls in *Iberia* and *Mexico*, and the development of the horse culture among the plains indians in *Centennial*. We can add the relationship between northwestern coastal Inuits and marine mammals in *Alaska*. In all of these cases Mr. Michener was more concerned with the inventiveness and determination of the people than with the ethology of the animals, yet readers learn things of importance about the latter as well as the former. Indeed, we read his books for exactly these purposes. Clearly, his human characters grow and mature, sometimes ontogenetically, sometimes transgenerationally, in their ability to exploit valuable natural resources, and this represents a type of increased understanding. On the other hand, do the human characters also grow in their understanding of the evolution and causation of animal behavior? Not very often. It happened with the fighting bulls, but to a much lesser extent with other animal characters.

How could such growth be portrayed? We think the answer resides in a vision of human intellectual development and education that sees children as prone to gratuitous anthropomorphism as an outgrowth of their inevitable egocentricity (Flavell, 1986). They think and want and feel; therefore it is easy for them to assume that other actors, human and animal, do the same. Later in life, particularly in school, the growing mind learns to be careful about assumptions of all sorts, including those relating to other minds. This caution leads to linguistic constructions that describe actions carefully without lacing the descriptions with gratuitous anthropomorphism or with any other interpretative declarations that lack reasonable foundations. And so the child becomes an adult. As the adult continues to cogitate on these matters, the framework of critical anthropomorphism can allow the person to consider once again questions about animal mentality, but now from a mature, cautious perspective. The key difference is that now it is a matter of asking serious questions rather than a matter of treating infantile assumptions as facts without having an appreciation for the difference between these two kinds of propositions. Intellectual developments like these can be illustrated and dramatized by a writer with Mr. Michener's talent and depth.

(6)

Our feeling is that a book containing material of this sort is desperately needed and that the task should not be left to professional researchers who tend to be didactic pedants. They do all right in lecture halls and in preparing technical papers for scientific journals, but precious few have been successful, even marginally, at crossing the line between technical writing and literature. The job really ought to be taken by a writer of fluid prose who, like Mr. Michener, teaches without lecturing. Here is exactly what is needed:

> In acquiring a narrative style, establish a balance between two types of writing: scene (in which characters communicate and act) and carry (in which they are talked about and acted upon). To write either type well is difficult; to alternate and link them artistically is the soul of narration. (*Literary Reflections*, p. 101)

To avoid gratuitous anthropomorphism with animal characters, the artistic demands on the writer are greater than those imposed by the need to develop human characters. Constructions must convey the rich complexity and adaptiveness of animal behavior, the diversity of ways that instinct and experience shape performance, and the architecture of interactions involving genetic substrates and environmental influences. All of this must be done with an artistic eclecticism regarding the multitude of interpretive possibilities that animal behaviorists utilize, ranging from reductionism to epigenesis to cognition. Moreover, interpretation of any sort must be kept separate from the facts. Can these goals be reached in the context not of a textbook but of a novel, with scenes moving forward deftly, never bogging down in pedantic chatter? This will require great skill, but we believe Mr. Michener is equal to the task because he can do something that most academics simply cannot—he can keep nine-tenths of his research submerged and out of the reader's face, so that the pages move along with admirable effortlessness. In this way, Mr. Michener can also experiment with the contrasting sorts of interpretations that children, adolescents and adults might give, adding a splendid psychological dimension to the overall treatment.

American education is in trouble for many reasons. College and university tuitions have increased tenfold over the last three decades, but there is considerable doubt that a BA or BS today can measure up to the same degrees three decades ago. Numerous authors have provided analyses of the problem, and the list of causative hypotheses is lengthy. Without doubt, educators and their administrators share part of the blame. See Mr. Michener's comments in *The Novel* (p. 247) for an indication that he is well aware of these problems:

> Can't you see it coming? Television will replace the novel, that's for sure, and it will be so bad that no one will waste his mind upon it, supposing there's any mind left. Novelists in 2084 will be traveling from one university or perhaps from one monastery to the next, because at the rate universities are drifting downward they'll be no better than glorified shopping centers.

The book we are asking for is sorely needed both in the trade market and in the academic arena. We'll bet that a carefully crafted work meeting the specifications described above will become mandatory reading in colleges and universities, as the book will do more for American critical thinking than the raft of courses currently designed for that purpose. It will serve the intellectual growth of millions, now and into the future. It will combat the forces of mediocrity at work every-

where, among those who love animals and among those who merely see them dimly through a self-imposed anthropocentric haze. Animals might constitute the centerpiece of this much desired book, but the words will speak to issues that transcend the topic at hand, escaping the wretched constraints of disciplinary fundamentalism to touch the hearts of all disciplines. Orwell's *Animal Farm* anthropomorphized animals to elevate human consciousness, perhaps Michener's *Animal Farm* will achieve a similar effect by going in the opposite direction. Hang in there. We need you.

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An Emendation to the Subspecies Name *Cnemidophorus sexlineatus stephensi* (Sauria: Teiidae)

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Recently, I named a new race of the six-lined racerunner, *Cnemidophorus sexlineatus*, from extreme southern Texas. This new subspecies was given the common name Texas yellow-faced racerunner and was named *C. s. stephensi* in honor of Mrs. Hazel J. Stephens Hickey. In this paper (Trauth, 1992) however, the subspecific epithet was incorrectly masculinized. According to the rules of the *International Code of Zoological Nomenclature*, a matronym is required; therefore, in the emended form, the feminized genitive name should now read as *stephensae*.

I thank Dr. Hobart M. Smith for drawing my attention to this taxonomic error.

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A Comparison of the UV-B Irradiance of Low-Intensity, Full-Spectrum Lamps with Natural Sunlight

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Abstract

Natural sunlight has a much higher UV-B irradiance than most commercial sources of low-intensity, full-spectrum lamps. The maximum UV-B irradiance near the equator (solar elevation angle $< 25°$) under clear, sunny skies, is about 250 $\mu W/cm^2$. Commercial full-spectrum light sources, such as the Duro-Test Vita-Lite, have UV-B light irradiances about 100 times lower than natural sunlight. Exposure times required for several commercial lamps to mimic five minutes of UV-B sunlight at the equator are tabulated.

Introduction

The use of low-intensity, full-spectrum lamps (e.g., Vita-Lite) has been reported to be critical for the successful husbandry of lizards, turtles, tortoises, and immature crocodilians as well as other unspecified reptiles (Frye, 1991; Seufer, 1991). The most often cited reason for using full-spectrum lighting is related to the need for the animal to synthesize vitamin D_3. The photochemical reaction that occurs in mammalian skin (and presumably in the skins of reptiles and amphibians) is a ring opening reaction of 7-dehydrocholesterol to form a conjugated double bond system, previtamin D_3. This compound (7-dehydrocholesterol) has significant absorption of UV light at the lowest wavelengths of light found in sunlight (290–310 nm). Hence the need for full-spectrum lamps to emit UV-B radiation (UV-B light is defined here to be light between 290 and 315 nm). Previtamin D_3 thermally rearranges, without enzymic catalysis, to form vitamin D_3 or cholecalciferol (Holick, 1989; MacLaughlin et al., 1982). Cholecalciferol can be further metabolized to calcitriol (1,25-dihydroxycholecalciferol). Calcitriol acts like a hormone in the regulation of calcium metabolism and is critical for normal growth and development (Frye, 1991; Lehninger, 1976).

There are significant risks to humans exposed to lamps that emit high intensity UV-B radiation because light in this wavelength range can cause sunburns (Armstrong et al., 1985; Berger and Urbach, 1982) and cataract formation (Silney, 1983), and has been associated with the development of skin cancer (Freeman et al., 1988; Henriksen et al., 1989). For this reason manufacturers are reluctant to sell lamp sources that emit significant amounts of UV-B light to the general public. This has led me and others to question how much UV-B radiation is actually emitted by full-spectrum lamps. Gehrmann (1987; 1994) has measured the UV-B light output of a variety of commercial lamp sources and has indeed found that one of the most commonly used full-spectrum lamps (i.e., Vita-Lite; Duro-Test) emits very little UV-B light.

There is very little experimental data on the metabolic or behavioral requirements for natural sunlight or full-spectrum light in maintaining captive reptiles and amphibians. Gehrmann et al. (1991) observed that neither vitamin D_3 supplementation nor exposure to UV-B light effected the growth of the heliophilic western fence lizard (*Sceloporus occidentalis*). Roberts and Gehrmann (1990) compared the growth of bearded lizards (*Pogona vitticeps*) exposed to either plant lights (Gro-Lux) or full-spectrum lights (Vita-Lite). Both groups were also exposed to a black light. There were no significant differences in growth between the two groups, suggesting that subtle adaptive physiological and behavioral responses were not dependent on full-spectrum light. The design of this experiment, however, did not allow for a conclusion regarding the effect of UV-B radiation since both groups were exposed to a black light. There is a report suggesting that green iguanas (*Iguana iguana*) cannot metabolize exogenous sources of vitamin D_3 normally (Bernard et al., 1991). These iguanas initially showed clinical signs of metabolic bone disease, but no new bone fractures were observed after exposure to an experimental UV-B emitting lamp (Sylvania 2096, 15 watt fluorescent lamp), suggesting that iguanas require UV-B light. In addition, anecdotal reports from veterinarians treating green iguanas for metabolic bone disease suggest that full-spectrum lamps are critical for the health of these lizards (Myers, 1994).

The relative intensity of UV-B radiation from different commercial lamps has been systematically studied (Gehrmann, 1987). The purpose of this paper is to compare the UV-B light output of those lamps studied by Gehrmann (1987) with the UV-B light intensity of sunlight from a variety of locations and latitudes.

Methods

The literature was examined for reports on measurements of sunlight as a function of wavelength, time of year, latitude, elevation and cloud cover. Many of the reports used units of intensity that were not directly comparable (e.g., erythema) to the measurements made by Gehrmann. Hence, only those papers that reported UV-B light in power units (e.g., watts) per area were used. The measurement of the natural irradiance of UV-B light is very difficult because the intensity of light falls off exponentially as a function of wavelength and very little UV-B light strikes the surface of the earth. Some graphical data required manual integration of the intensity of UV-B light over the wavelength range 290–315 nm in order to estimate irradiance. The intensity of UV-B light is heavily biased towards the longer wavelengths of the UV-B range

Table 1. UV-B Irradiance[a] from sunlight and commercial lamps[b].

Source/type of lamp or sunlight	Distance below center of lamp inches (cm)	UV-B irradiance of lamp/sunlight $\mu W/cm^2$	Time needed for UV-B level to equal that from 5 minutes of sunlight at noon at the equator hours (min)
Sunlight: location, time, date, weather, latitude, solar elevation angle (SEA), (citation)			
Equator, noon, SEA 0.0°, (Henriksen et al., 1989).	n/a[c]	265	0.083 (5.0 min)
Melbourne, Australia (37.8°S), clear, 29 January, SEA 19.8°, maximum irradiance, (McKenzie et al., 1993).	n/a[c]	263	0.084 (5.0 min)
Kodiakanal, India (10.14°N), sunny, April, SEA 0.0° (Sharma and Srivastava, 1992).	n/a[c]	260	0.085 (5.1 min)
Miami, Florida (26°N), noon, 21 June, summer solstice, SEA 2.3°, (Frederick and Snell, 1988).	n/a[c]	253	0.087 (5.2 min)
Lauder, New Zealand (45°S), clear, 28 December, SEA 21.8°, maximum irradiance, (McKenzie et al., 1992; 1993).	n/a[c]	212	0.10 (6.0 min)
Midlands, England (53°N), sunny, 28 July, peak intensity, SEA 30°, (Webb and Steven, 1987).	n/a[c]	178	0.12 (7.2 min)
Neuherberg, Germany (48.2°N), clear, 13 July, SEA 26.3°, maximum irradiance, (McKenzie et al., 1993).	n/a[c]	175	0.13 (7.8 min)
Longyearbyen, Norway (78.2°N), sunny, 15 July, SEA 54.8°, (Henriksen et al., 1989).	n/a[c]	55	0.40 (24 min)
Vantaa, Finland (60°N), hazy, sunny, July, noon (Kolari et al., 1986)	n/a[c]	55	0.40 (24 min)
Fort Worth, Texas (32.8°N); shaded, diffuse, 2 March, 1500 h, (Gehrmann, 1987).	n/a[c]	15	1.47
Duro-Test Vita-Lite: 20 watt, 24" (61 cm)	6 (15 cm)	3.1	7.1
	12 (30 cm)	1.1	20.0
	18 (46 cm)	0.7	31.5
	24 (61 cm)	0.5	44.2
	30 (76 cm)	0.2	110
Sylvania F20T12/350 BL: 20 watt, 24" (61 cm)	6 (15 cm)	4.3	5.1
	12 (30 cm)	2.6	8.4
	18 (46 cm)	1.1	20.0
	24 (61 cm)	0.8	27.6
	30 (76 cm)	0.0	n/a
Westinghouse FS20 Sunlamp[d]: 20 watt, 24" (61 cm)	6 (15 cm)	160	0.14 (8.3 min)
	12 (30 cm)	66	0.33 (20 min)
	18 (46 cm)	37	0.60 (36 min)
	24 (61 cm)	22	1.0
	30 (76 cm)	14	1.6

[a] UV-B light is defined here to be light between 290 and 315 nm.
[b] W. H. Gehrmann, Zoo Biology, 6:117-127 (1987).
[c] n/a - not applicable.
[d] No longer manufactured; similar sunlamps are offered by National Biological Corp, Twinsburg, OH.

(290–315 nm). That is, the contribution of the light from 290–294 nm is swamped by the intensity of light from 310–315 nm. Laboratory measurements of UV light from 290–295 nm are not readily available.

Results and Discussion

Table 1 shows the intensity of UV-B light at different locations and solar elevation angles (the angle of the sunlight hitting the surface of the earth). The data for locations with solar elevation angles less than 25° are remarkably similar (approx. 250 $\mu W/cm^2$; range 212–265 $\mu W/cm^2$), giving credibility to the methods used for estimating UV-B light intensity. It should be pointed out that although there is significant UV-B light at extreme latitudes, such as Finland and Norway, there is no detectable ultraviolet light shorter than 300 nm (Henriksen et al., 1989; Kolari et al., 1986). Since the action spectrum for previtamin D_3 has a maximum below 295 nm, natural sunlight at these extreme latitudes will photochemically isomerize very little of this compound.

Table 1 shows that the most commonly used lamps do a poor job of simulating the UV-B light intensity of natural sunlight. The only lamps that come close to the intensity of natural sunlight are sunlamps, which are sometimes used to treat psoriasis. The practical interpretation of Table 1 for the maintenance of reptiles and amphibians will ultimately depend on experiments elucidating the time-integrated exposure of UV-B light necessary for the health of captive reptiles and amphibians. For example, is five minutes of equatorial sunlight sufficient for a particular species to prevent metabolic bone disease or to stimulate breeding? The answer to these questions remains until appropriate experiments are carried out. In the mean time, Table 1 can be used as a relative guide to the use of low-intensity, full-spectrum lamps in the care of reptiles and amphibians.

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Keeping Reptiles, Smuggling Wildlife, Wildlife Bureaucrats
Smuggled-2, An Australian Perspective

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INTRODUCTION

Most American reptile keepers and readers of this *Bulletin* would be aware of some of the bureaucratic hazards involved in keeping reptiles. There are a number of rules and regulations to be aware of and to comply with. These include international laws (CITES), national laws (Endangered Species Act, Lacey Act), state laws and local laws. Changes and alterations are constantly being made to all of these laws and a veritable army of bureaucrats exists to oversee their implementation.

Although these laws are supposedly there to protect the welfare of reptiles and other wildlife, this is not always what actually happens. Sometimes instead the net result appears to be nothing more than a large self-serving bureaucracy that attacks law abiding people—so-called "soft targets"—solely in a bid to justify its own existence.

Most American reptile keepers are aware of the ill-fated Snakescam operation that ran from 1979 to 1981, where federal agents set up the Atlanta Wildlife Exchange as a front to entrap reptile keepers into buying illegally obtained federally or state protected species. Although federal and state authorities hailed the operation as a success, the reality was somewhat different. Any pre-existing illegal trade in wildlife remained basically untouched. Furthermore, the Atlanta Wildlife Exchange itself actually created a new illegal trade. The long-term result of the operation was a previously unknown level of paranoia among reptile keepers and researchers in terms of dealing with one another and law-enforcement agents.

A similar scheme called Operation Falcon commenced in 1984, targeting falconers, and it had similarly disastrous results. That "sting," which again cost U.S. taxpayers many millions of dollars, failed to uncover any major illegal trade in falcons. In fact all the operation did prove was that no such trade existed. However if one were to have read the media releases put out by federal agents, one could be forgiven for thinking that American agents had uncovered and busted a huge number of people illegally trading falcons.

In fact all violations identified by the federal agents related to falconry offenses, NOT trade in wild-caught or captive-bred birds.

For those readers who may suddenly say, "He's talking about ancient history here," I don't mean to disappoint. I refer you to the recent article "Nightmare in Texas" published in *The Vivarium*, 6(4). Detailing the 1994 "Operation Rockcut," the article told how yet again federal agents were entrapping "soft targets" for petty offenses and then trumpeting their success to the media as the uncovering of a "multi-million dollar poaching ring" (more lies). It seems that "never let the truth get in the way of a good story" is still the motto for a number of these people.

I also refer readers to a number of recent (1994) articles published in *Notes From NOAH*, dealing with yet more illegal, immoral or dishonest activities by wildlife officials.

Within the United States two organizations have recently been formed by keepers and traders to look after their interests in what has now become a legislative and legal minefield. A number of prominent CHS office bearers are involved in these organizations, whose primary role appears to be to look after the interests of live reptiles and those who keep, trade or otherwise deal with them.

Certainly the long-term trend is for increasing legislation and restrictions on trading and keeping "nondomestic" animals. As these laws get to be enforced to ever greater degrees

so too will clashes between officials and those they deal with. While many officials do a good job in often difficult circumstances, there are others who do a terrible job in not so difficult circumstances and actually put the wildlife cause backwards, rather than forwards.

The problems facing wildlife/reptiles, wildlife keepers, law enforcement and related issues are many and complex and cannot be accurately summarized in a series of small articles. I make no attempt to do so in this introduction and the following articles. However in the following series of articles I document a number of cases involving corruption, dishonesty and incompetence in Australian wildlife departments in terms of their dealings with reptile keepers and others. Most of these cases will not be known to readers of this *Bulletin* and it is for this reason they are being covered here. The parallels between law enforcement in Australia and the United States are many and what has happened in Australia can and may happen in the United States as well. The only major differences are/will be the cast of characters, including species involved.

For the benefit of readers, the most powerful wildlife authorities in Australia are the state wildlife departments. These tend to "regulate" wildlife keepers and most wildlife licensing laws. In Australia you usually need a license to keep *any* reptile, no matter what it is or where it comes from. This includes small lizards that may commonly be found walking through a suburban garden.

Customs, the National Parks and Wildlife Service and the Department of Primary Industry are the main federal regulators of wildlife export from Australia, although such is generally covered by a long-term blanket ban.

Not all wildlife officials and departmental staff are bad. No doubt most are just normal family people doing what may regarded as an abnormal job. Many are just enforcing laws that are wrong, yet with no power to change the laws themselves. Many are doing very good wildlife conservation work, again in spite of often difficult regulatory or other circumstances. However a substantial number scattered across key sections of a number of wildlife departments in this country are demonstrably corrupt and dishonest and causing substantial damage to wildlife and those who work with it. These people are sometimes able to sabotage the work being done by their entire department. The damage done often seriously outweighs the good work being done by their colleagues.

My book *Smuggled—The Underground Trade in Australia's Wildlife*, published in May 1993, documented a number of cases of official corruption, misconduct and so on, involving reptile keepers and others. That book was immediately and illegally banned by corrupt officials named in the book. The ban was lifted a month following publication after a public outcry and much media publicity. The book was on local best-seller lists following its re-release. The book detailed widespread corruption, including, bribery, theft, phone tapping, murder, arson, court fixing, perjury, smuggling of wildlife, drugs, gold and weapons—all by Australian wildlife officials. There are now several inquiries in progress as a result of material published in *Smuggled*.

I have now written a sequel to *Smuggled*, called *Smuggled-2*. It will be published later in 1995. The following series of articles contains excerpts from the manuscript of that book that will be of interest to CHS members and other reptile people. Not all cases involve reptiles or herpetologists; however the officials named tend to be those who also regulate the reptile keepers and researchers. This makes the events involving them still highly relevant to reptile people—particularly when involving questions of honesty and a lack of disciplinary action against officials found to have done wrong.

These articles will not contain bibliography or other source material. A complete bibliography (about 1,000 entries) identifying all sources (in all forms) used in *Smuggled* and *Smuggled-2* will be printed at the rear of *Smuggled-2*.

PART 1. GREEN PYTHONS

Before detailing a case involving the Queensland wildlife bureaucracy, I should relate some other information to put the story in perspective.

Green pythons (*Chondropython viridis*) are a highly sought-after species everywhere. They occur in a small remote area of Cape York, Queensland, where they are very hard to find, and throughout most of New Guinea, where they are common. Large numbers have been legally exported from Irian Jaya for years to Europe and the United States, where they are now common in captivity and regularly bred by people such as Alan Zulich and Trooper Walsh. In the U.S. hatchlings usually sell for three to five hundred dollars.

In Australia at the time of writing (1993–1995), only about twenty individuals and institutions legally held the species and most had experienced difficulties in attempting to breed them. Some of these keepers had in 1993–1995 taken offers of between one and three thousand dollars a hatchling in the event their snakes bred. Perhaps here I should note that a number of the captive green pythons in Australia had been smuggled in and subsequently licensed during periods of amnesty in New South Wales and Queensland, making some of the current license holders suspected smugglers or associates. For example the green python shown on the cover of my book, *Australian Reptiles and Frogs*, had been smuggled in from the United States and licensed in 1988 during an amnesty.

On 20 January 1993 a German national, Heidemarie Beibl, then aged 31, was busted at a Brisbane motel with 12 hatchling green pythons. She had arrived from Europe and was due to fly back almost immediately. Almost certainly the snakes were destined for one of the keepers of green pythons who would then claimed to have bred them. Assuming a return ticket price of less than $2,000, a cost of the snakes of less than $500 each, totaling $6,000, miscellaneous expenses of less than $1,000 and a "commission" to the apprehended courier, Ms. Beibl, of $1,000, the importing operation would have cost no more than $10,000, and possibly half that amount. The profit from such an operation, assuming only ten

of the snakes were sold (two kept, which would be likely) at $2,000 per snake, a realistic estimate, would be at least $10,000 and possibly up to double that amount.

Beibl was convicted and fined $3,500. She was also investigated over the incident upon her return to Germany. She didn't however divulge to whom she was bringing the snakes. The snakes were forfeited to the crown and sent to Sydney's Taronga Zoo, who ironically had gone to great lengths to legally import some from Washington Zoo just a few years earlier.

The illegal reptile trade in Queensland also had a few other notable busts in 1993. A black-headed python (*Aspidites melanocephalus*) was found in a mail parcel at Brisbane, having been sent from the north of that state. This species sells legally for about $1,000 in Australia and about $5,000 in the United States. On 16 July two spiny-tailed monitors (*Varanus acanthurus*) were found inside a hollowed-out book in a parcel at the Cairns mail exchange. On 27 July a pair of pythons were found in another parcel containing clothes, again at the Cairns mail exchange. Both had been destined for Germany. Charges have been laid over the incidents and were pending at the time of writing (1993–1995).

These cases followed earlier (1991 and 1992) incidents involving Germans posting reptiles back home from Cairns and Darwin.

It is at this point that the picture starts to get muddied.

Operation Birdman

Bill Zingleman, himself a bird keeper of many years and a former policeman (until 1985), had since the late 1980s approached relevant authorities in Queensland about wildlife smuggling activity in far north Queensland. This included the Fitzgerald (corruption) Inquiry and the Criminal Justice Commission (CJC). The Fitzgerald Inquiry claimed "insufficient resources" to investigate Zingelman's claims. Living at Herberton, near Cairns in far north Queensland, he had been retired from the police force in 1985 on the grounds of ill-health, having suffered a nervous breakdown resulting, he asserts, from attempts by corrupt people attempting to stop him from exposing their activities. In an interview in March 1994, Zingelman claimed to have exposed a racket involving former Queensland Police Commissioner, Terry Lewis. According to Zingelman, "He stopped the investigation, he flew a company director, second in charge of a major company from Sydney, to have a major conference to stop my investigation into a major Mafia-style grocery racket, believe it or not . . . about 1980, he was Commissioner . . . and he laughed in my face at a meeting after that."

According to Zingelman he'd also uncovered wildlife smuggling problems when a policeman, and even more so since. He noted, "I uncovered police involvement . . . two particular National Parks officers . . . their conduct led me to believe that they were up to no good and um, in fact it transpired that one of them set up this multi-million dollar foxtail palm racket." DEH officials Gary Reiss (mainly) and Greg Wellard were allegedly the key players at the Cape Melville National Park, involved in harvesting seeds from foxtail palms (*Wodyetia bifurcata)*. Zingelman claimed to have found corruption from "the bottom line to the top" in both the police and the Wildlife Department (DEH). Zingelman said he thought Reiss had arranged earlier foxtail smuggling operations busted by other DEH officials and police.

Zingelman claimed in March 1994 to have been the instigator of the largest ever antismuggling operation in Queensland. It was called "Operation Birdman" and he said, "I think you'll find Operation Birdman is Operation Zingelman." Operation Birdman was at the time ongoing, but had commenced in early January following his earlier approaches to DEH officials to launch such an investigation.

Zingelman had named a number of animal keepers and wildlife officials as prime suspects and targets of Operation Birdman. He claimed all were under investigation for smuggling birds, reptiles and plants.

The Beginnings of Birdman

Robert (Bob) Buckley had been a major bird and reptile keeper for some 20 years. He was licensed by the Queensland DEH and had many rare and sought-after animals on his 60-acre Herberton property, including green pythons.

For the purposes of this story, his first run-in with officialdom, was around about 1980. According to Buckley, "I was fighting a local conservation battle and the police said to me, 'You're just a smart-ass. We are going to fix you,' and I said, 'Well how are you going to fix me' and they said 'Oh, well for starters we'll make sure the National Parks and Wildife never leave you alone' and um, they said as well, 'We'll put you through so many court cases you'll have to leave the state as well' so I said 'Well go ahead, because I believe in what I'm doing' and um, the very next day they came back with the National Parks and Wildlife and I had a series of visits from them every couple of months, . . . I've been keeping snakes on this property for about 18 years . . . they've been harassing me all those years. . . . "

The two police with whom Buckley had his original run-in "were called Lipp and Schofields of the Stock Squad, . . . and Schofields is now the Chief of the Cairns Police District."

About January 1993, Buckley was told by a bird dealer friend in Sydney that the Queensland wildlife authorities wanted to take his green pythons from him. This friend had a number of key contacts in the department. Nothing appeared to come from this.

About Christmas 1993, nearly 12 months later, Buckley bred green pythons. He'd bred the species twice previously, but only had small clutches of eggs and low hatch-rates. He'd been keeping the species for many years. One of his original females had been obtained from Hallstroms's stocks at Taronga Zoo many years earlier. The Christmas 1993 effort was his best yet. Two snakes produced large clutches with the majority of eggs hatching to produce some 28 healthy young.

By virtue of the sought-after nature of green pythons, Buckley's success became a major talking point among other

reptile people and wildlife officials. As Buckley's snakes were legally held, from a legal point of view the breeding in itself wasn't terribly significant. However, shortly after Buckley bred the snakes, a contact of one of Buckley's associates in DEH overheard some comments made in relation to his breeding success. Buckley later noted "the information I got was that this Lyall Naylor had said to Ricketts of the fauna squad that 'Buckley could't have bred all those snakes, they've got to be smuggled,' yes, . . . that was just another passing comment."

Shortly after this a Mr. Peter Hensler, an official with DEH came to Buckley's house and took his wildlife license record books. Buckley sensed something was wrong and rang the Cairns-based official from DEH that he usually dealt with. Brent Vincent, whom Buckley described as being "honest as the day is long," told Buckley about Hensler, "He's got nothing to do with wildlife." Vincent said that Hensler was with the Stock Squad and that Buckley should "just get the books off this bastard . . . Hensler."

According to Buckley, it was in the first week of January 1994 that for unknown reasons, Vincent, who had been a senior wildlife officer, was demoted, stripped of a number of his authorities and sent to Bamaga in the far north of Cape York to police crocodiles.

Shortly after, on 6 January, "Operation Birdman" swung into action. Perhaps here I should mention that I had never had any contact or dealings in any way shape or form, with any of the persons named with any connection to this operation, either from the official side or those raided, including those named above until late January 1994, which was after the key events of Operation Birdman took place. Readers should remember that quotes taken are either from printed material or taped interviews.

The Raids

It wasn't until 4 A.M. on the morning of 6 January 1994, that Buckley finally went to bed. He and a visiting friend had spent most of the night collecting small tree frogs to feed his newly hatched green pythons.

According to Buckley, within a few hours, the following events happened:

"ten minutes before I was raided, the dawn raid, Operation Birdman, the phone rang and I picked it up and this voice said 'look Bob, you don't know who I am and I'm not going to tell you who I am, but I'm a friend and there are 34 Department of Environment and Heritage, Police and Customs heading towards your place right now, they'll be there within ten minutes' and they were, I said 'thanks very much' and put the phone down and went and had a shower. Before I finished my shower they were here. No I thought, . . . well, I was reading your book (*Smuggled*) actually the night before and I'm saying to myself no way, no, no, no, this is all past history, it wouldn't happen to me you know. . . . I was quite resigned. I thought yeh, it's happening. You know I handed it out to them when they were here, I said 'Look, if you want to find out about smuggling, read this'. . . . I kept on pressing the book on them . . . and actually a few of them did have a read. . . . Look Raymond, when I was reading your book I did not believe this could happen to me. . . . I haven't even finished reading your book, I've given it to my lawyer."

Prior to getting to Buckley's place a roadblock was erected to prevent the possibility of media people seeing the raid. There were 34 men in 20 cars. The leaders of the raid according to Buckley were Michael Anthony Chep and Peter Hensler, with the focus clearly being the green pythons. According to Buckley, Chep ran into his house and "started running round accusing me of smuggling the snakes. . . . I said [expletives deleted]!" By common consent, Buckley cooperated with officials fully and offered to allow his snakes to be microchipped for identification purposes and DNA tested to verify the parentage. Both offers were declined.

During the course of the raid Buckley warned a wildlife officer to take care when opening a cage with a highly-strung king brown snake (*Pseudechis australis*). He was told, "That's nothing a bit of three by two wouldn't handle." Another officer, a self-professed expert on reptiles, started questioning Buckley at length about an alleged photo of a taipan (*Oxyuranus scutellatus)*. Buckley protested that the snake in the photo was in fact a very different red-bellied blacksnake (*Pseudechis porphyriacus*). Eventually the self-professed expert was pulled into line by another official who said "Look forget it mate, he's right." A number of officials told Buckley that the agenda was to put a stop to people like himself breeding wildlife. He was told, "We're not going to allow you to breed them, in the end as they die off you won't be allowed to keep them anymore and nobody will keep anything . . . that was the agenda." DEH official Mike Pople was, according to Buckley, "gloating . . . that they're going to change the law and that nobody will be allowed to keep venomous snakes in Queensland, except maybe a few special people. Oh, he was gloating, telling me, ' . . . we're going to fix you bastards right up you know.'"

At the end of the seven-hour raid, no animals were taken and no seizure notices placed on anything. Furthermore Hensler returned Buckley's record books that he had taken sometime earlier, signing them as inspected. According to Buckley that showed "I was doing it by the law. . . . Every one of my animals was completely utterly legal." It may also be worth mentioning that some of the animals in Buckley's care were actually being held on behalf of DEH.

The officials then proceeded to raid a number of other properties. According to several sources, including DEH officials, there were a few minor seizures only. These were a sulphur-crested cockatoo (*Cacatua galerita*) held without a permit by a person who had saved its life, a common spotted python (*Antaresia maculosa*) that had crawled into a house and been thrown into a tank as a pet by the kid who lived there, a road-killed taipan and Burton's legless lizard (*Lialis burtonis)* in a jar of methylated spirits, that had been kept by a man to show his kids the difference between a snake and a lizard and a few common parrots bought by individuals from pet shops and transferred on either the wrong permits or held on allegedly expired permits. The officials never appeared to have found any evidence of poaching wildlife from the wild.

Misinformation

Immediately following these raids, DEH officials put out a series of media releases, widely reported in the north Queensland and national media the following day. The *Cairns Post* reported "Poacher's snared on tablelands." The stories alleged major smuggling operations in north Queensland had been uncovered in the raids the day before. Clear reference was made to seizures of fauna including Buckley's green pythons, with an alleged total of 90 birds and reptiles being seized. The media releases signed by Sergeant Greg J. Ringuet falsely stated, "All fauna has been impounded by the appropriate departments and is being stored overnight. For security reasons they will not be able to be photographed or filmed." The reality, of course, was different. None of Buckley's animals had been taken, and the reason the media couldn't photograph the allegedly seized animals of course was because most of those named were Buckley's and none was being held by the department. The "security reasons" excuse not to allow photographing of these animals was a blatant lie.

Furthermore the media releases falsely stated, "The operation also saw the use of DNA testing of fauna in Queensland for the first time." That was yet another lie. Perhaps DEH should have employed Buckley to write their media releases as it was he who opened his big mouth and suggested DNA testing to them! The media releases stated, "The estimated value of the fauna and reptiles seized is $200,000." The true value of what the officials actually seized wouldn't have even been $200. I suppose the DEH officials weren't concerned with a little white lie . . . or misquoting by a factor of 1000!

The *Cairns Post* quoted Ringuet as saying, "All officers involved in the operation hailed the seizures as a great success." That statement may have helped justify the operation of the raid and the jobs of those who participated, but in terms of seizures made, alleged offenders breached and manpower used, the operation was clearly a failure.

Outraged, Buckley went to the media the same day, to attempt to present the facts as he saw them. His version of events was reported in both local papers and WIN Television. This led Mike Chep, organizer of Operation Birdman to retract most of the substance of the earlier media releases. Chep confirmed that only 12 birds and three reptiles had been seized in the operation, hardly justifying the use of 34 men on the raids, with nothing having been seized from Buckley, who as the prime target of the operation had taken up seven of the ten hours of raids.

Furthermore the day after the raid Buckley's lawyer, Tony Entriken, spoke to Mike Chep and was told that Buckley wasn't under investigation, but instead "All our fauna officers and even the fauna squad are all under investigation." Entriken also arranged a meeting with DEH officials at his office for the following day. They never showed.

Three days later, Buckley got what he called "the small three-man raid." They took six adult and 27 hatchling green pythons. When Buckley asked on what grounds, the officers kept saying "Read the act. Read the act." Under Queensland wildlife laws, officials can seize and hold animals for up to a year without having to either justify the action or laying charges. Furthermore they are automatically indemnified against actions in the event of deaths of animals. Buckley claimed that the sole basis of the second raid was as a payback for him going to the media with information adverse to DEH.

Perhaps I should mention here that Zingelman and Buckley were both members of the Cairns Bird Club and had fallen out some time earlier. Following publication of an article in Brisbane's *Sunday Mail*, on 13 March, featuring Zingelman and Operation Birdman, Buckley suspected that the original raid on his house was due to false information supplied to DEH by Zingelman. This was later corroborated by Zingelman but he went on to say that DEH officials had screwed things up.

Entriken was told in March 1994 that DEH officials expected to lose at least a third of the snakes seized. That may have been about the most honest statement to emanate from DEH over the whole matter. In an unrelated court case in 1993–94 another fauna officer told Townsville Magistrates Court that a 40 percent mortality rate was routine. Clearly concern for the welfare of the snakes wasn't a major priority.

The hatchlings were sent by DEH officials to be held at Sydney's Taronga Zoo. Head keeper Terry Boyland, already with his hands full with Beibl's 12 green pythons and their own legally imported ones, certainly didn't want any more. To Boyland's credit, he initially appeared to be putting in efforts beyond the call of duty, including regular contact with Buckley in a bid to maximize the snakes' survival prospects. There were however casualties.

Checking of all recognized snake keepers and experts in Australia, including institutions, failed to reveal where the six adults were being held. There were a number of unconfirmed reports that the six adults were being kept by Mike Pople in his garage. Pople is regarded as only having minimal expertise with reptiles.

By late March 1994, no charges had been laid against Buckley, in spite of repeated invitations to do so by himself and his lawyers. His snakes had not been returned. DEH official Mike Chep refused to comment on the progress of the operation, saying little more than "It's almost over." Buckley told the *Cairns Post*, "They can't just make up their own laws. . . . I have been victimized like no one has been victimized before."

A number of wildife officials in Queensland and elsewhere had publicly commented that Operation Birdman had been a failure. Brent Vincent's offsider Darren Staunch, was "pissed off" in relation to the whole affair. Buckley summed up saying, "It's simple, let us keep what anybody else can kill, that's all I ask for, because they want to kill everything in this country."

Nothing Learnt

Eventually, in April 1994, DEH officials finally got around to charging Buckley with various offenses. He faced 38 charges in all. He was charged with illegally obtaining his

reptiles, licenses offenses and so on. According to Buckley, "They threw the book at me!"

Throughout the ordeal, he maintained his innocence and went further to say that the DEH officials who charged had only done so to cover up their own ineptitude.

At the end of a three-day trial on 12–14 September, DEH officials failed to get a single conviction for any of the 38 charges. Buckley branded the whole exercise a "gross waste of taxpayer's money." Buckley's lawyer, Tony Entriken said, "I think Queensland would have been a lot better off with another National Park instead."

During the lead-up to the case, Boyland of Taronga Zoo appeared to have divorced himself from the matter. Buckley stated that Boyland had told the wildlife officials he would not go to court as an expert witness for them. Instead DEH called a junior keeper from Taronga Zoo, Matthew Millgate, to give so-called expert evidence against Buckley. It later turned out that the Magistrate rejected Millgate's alleged expertise, declaring Buckley as the only expert in court.

Magistrate Laurrie Vera ordered DEH to immediately return to Buckley the snakes they'd taken from him. This however wasn't possible. You see, according to Taronga Zoo, at least 19 of the 27 snakes had by that stage died (so much for their expertise!) Furthermore, DEH still refused to divulge where the adults were.

As if all this wasn't bad enough for Buckley, he now has to go through the whole ordeal again. You see DEH have lodged an appeal. Worse still, Buckley has been totally destroyed financially over the matter. Calls to the Goss government for compensation or legal assistance in the appeal have fallen on deaf ears.

DEH official Greg Wellard refused to comment to the media following Buckley's court victory. Perhaps he was still wiping egg off his face after another incident where his shotgun toting officers nearly killed another so-called wildlife trafficker.

In July 1994, three wildlife officials, along with a large number of local police and officers from the Boating and Fisheries Patrol did a dawn raid on Mr. Roger Spencer and his family. This was in the peaceful isolation of Shelburne Bay at the tip of Cape York.

Officials barged in, brandishing shotguns, demanding to see his allegedly unlicensed crocodile. The crocodile was being kept in a shed. Wildlife officials decided not to seize it when they found out it was only a wood carving! DEH officials refused to give the source of their so-called tip-off.

In the case of Buckley, I remind readers to remember the names of the key DEH officials who organized the raid on his house, dishonest media releases and so. In particular Mike Chep, Peter Hensler, Gary Reis, Stafford, Greg Wellard and Gavin Ricketts. Thier names will come up again as key players in yet another scandal in north Queensland. That involves the illegal trade in foxtail palms, which is the subject of next month's article.

More Seized Reptiles

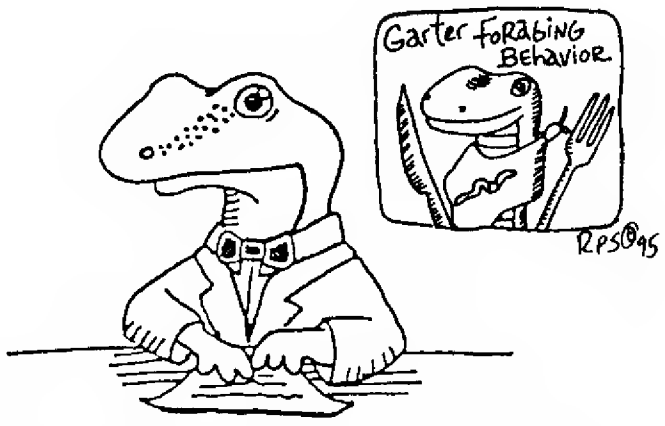
In relation to the fate of Buckley's green pythons, another reptile keeper, in Victoria, Dave Parry, had a similar experience. Dave Parry of Koo-wee-rup had five bearded dragons, *Pogona vitticeps*, seized by Victorian wildlife officials in February 1994. The lizards were taken on the suspicion that some hadn't been captive-bred as stated by Parry. A month later, the officials returned four of the five lizards. One had died. No charges were laid. Nor was there any apology for losing one of the lizards. Another of the lizards had been sick when seized, having had a large subcutanous abscess. While in the custody of the officials it was operated on by veterinarian Helen McCracken and returned to Parry in better condition than when seized.

Parry didn't have a terribly good run in 1994. Two weeks after he'd had his five lizards taken by officials thieves broke into his house and stole 15 nonvenomous snakes from his collection of about 70. Also taken were household effects. The total value of snakes lost was about $5,000. Other goods stolen were also worth several thousand dollars. Investigating police officer Ollie Gasparai noted that the thieves had used rubber gloves and were professionals. Wildlife official Tony Zidarich told Parry that the animals had probably been stolen to fill an order, possibly overseas. That the reptiles didn't appear to resurface in Australia in spite of a nationwide alert for them (based on known identifying characteristics) further indicated that they had probably been sent out of the country.

Next month: *Part 2. Queensland — Bureaucracy before Conservation*

Bull. Chicago Herp. Soc. 30(4):78-79, 1995

NEWTLINE



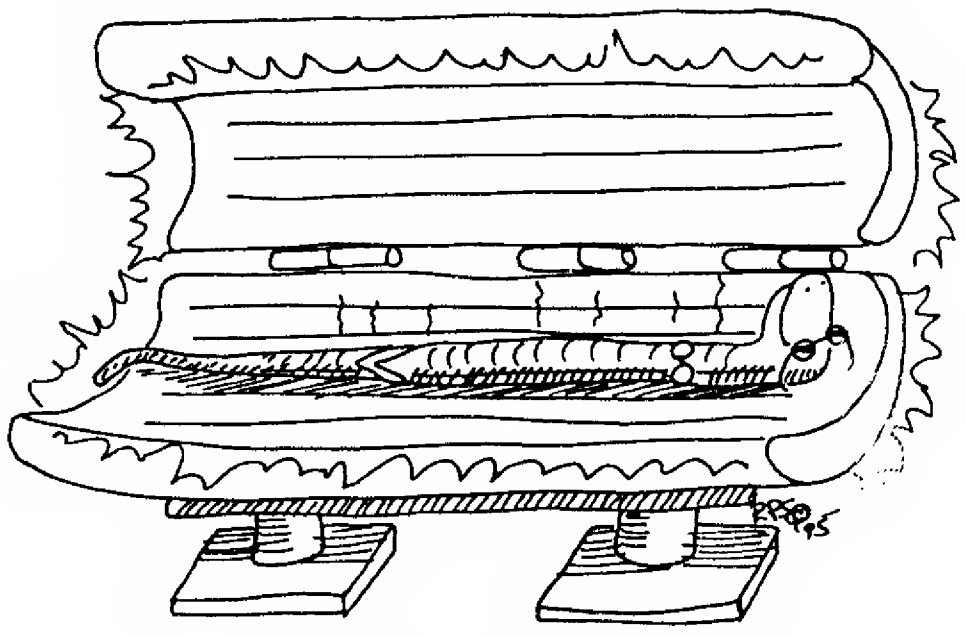
Turnout was outstanding for the February 28, 1995, meeting of the Chicago Herpetological Society in the James Simpson Theatre at the Field Museum. President **Marcia Rybak** had her hands full as she greeted members and guests and began the meeting with the announcement that the office of CHS Vice-president has yet to be filled since **Steve Spitzer** resigned. Marcia has assumed the duties and is in the process of obtaining confirmations for upcoming speakers and asked for suggestions. Also, on behalf of the CHS affiliated Turtle Club, she welcomed us to attend their monthly meetings at the Emmerson Park Field House in Chicago. Marcia also serves on the board of the National Herpetological Alliance as Secretary, along with CHS Publications Secretary **Mike Dloogatch**, who serves as the organization's Treasurer. She encouraged us to support the newly formed not-for-profit lobbying organization whose mission statement is to protect the rights and represent the interests of individuals to maintain, breed and sell reptiles and amphibians in a responsible manner. She considers this "a noble cause" and asked that we pick up a brochure available in the lobby for further information.

Adoption chairperson **Char Haguewood** announced that she had prepared a detailed book listing various reptiles and amphibians awaiting adoption. Members were encouraged to look through the listings and, if interested, provide her with a phone number. Iguanas of all sizes were desperately in need of homes. Also, as coordinator of the 1995 Midwest Symposium, Char announced that the it has been tentatively set for some time in October. Exhibitors, dry-goods vendors, registrars, and a security staff were still needed. Member-at-large **Chris Lechowicz** announced that he has obtained the current legislative laws for Illinois and Indiana regarding obtaining permits. He asked that we telephone him for further information. **Nicole Marrello** announced the CHS sponsored parasitology seminar had been scheduled for March 4, 1995, at 7:00 P.M. at The Grove in Glenview, Illinois. **Ron Humbert** reminded us that the annual Salamander Safari at Camp Sagawau would be held April 2, 1995. In the lobby, Ron distributed exhibition applications for the CHS Reptile and Amphibian Expo (held May 27 and 28 from 10:00 A.M. – 5:00 P.M. at Triton College in River Grove, Illinois). Merchandiser **Joan Moore** gave a brief presentation on popular books and stated that she would be available in the lobby for any questions. Also in the lobby was the library cart. On staff were **Jenny Picciola** and **Renee Gralewski**. Following a 30-minute break, new raffle chairperson **David Beamer** raffled off donated goods.

John Murphy introduced the evening's guest speaker, third time presenter **Dr. James Gillingham**, of Central Michigan University. Dr. Gillingham thanked the CHS for the invitation and considers the CHS "a great group of people." He dedicated his presentation entitled, "Foraging Behavior in Garter Snakes", to his friend and colleague, David Chiszar. "This is how we do things in the field rather than in the laboratory." jested the rather zealous Dr. Gillingham. He first became interested in the feeding behavior of garter snakes when he came across a publication riddled with generalizations but with little scientific data to back it up. He believes these snakes have two basic strategies in which they feed; the "hunt and search" or active method and the "sit and wait" or passive method.

The distribution of the common garter snake ranges from the tip of Florida all the way north to Canada, west to Washington, and even south to California. Closer to home, they can be found in Illinois, Wisconsin and Michigan. Seven species of snakes can be found on Beaver Island, Michigan. For this reason, Dr. Gillingham set up camp on Beaver Island with a crew consisting of graduate students for a three year study in which they carefully mapped and observed foraging behaviors of garter snakes. Foraging behavior consists of the search for and capture of food in the following sequence: Search, stalk, attack and subdue.

He found it easy to identify a Beaver Island garter snake by the size of its head. For some unknown reason, Beaver Island garter snakes have much larger heads than those on the mainland. Beaver Island was highly suitable for the reptiles because it contained an "old field" situation with several abandoned farms and lots of trash, scrap sheet metal, tar paper and driftwood. A large slab of concrete, possibly an abandoned foundation for a rural house, chipped and cracked from age, was instead used as a "spa" by a substantial number of eastern garter snakes, all of them gravid females. The cracks provided perfect shelter, while the slab was a glorious basking or "tanning" bed. For close observation, Dr. Gillingham and his crew built a mini "Mackinac" bridge over this concrete area equipped with a series of towers, platforms and bridges. To aid in this controlled study, binoculars, tape recorders and a computer data recorder were used.



Beaver Island Country Club

Individual specimens were gathered and color marked for easy identification. (The color is easily shed when the reptile sheds its skin.) It was asked if this mark and recapture method leads to easy predation by birds. He responded by stating that he knew of only a single instance of predation by a crow during the study. Once a garter was captured, a regurgitation technique was applied. Results revealed that 92% of their diet consisted of earthworms, although slugs, toads, frogs, birds, a mouse, and a snake were also found. Similar to birds, snakes were observed jamming their heads into the ground to feed on earthworms. He presented a table of some general information correlating the foraging modes. His quantitative data compared the time inactive to the time active and the capture rate in the form of worms per hour. He suggests that the snake followed the scent of the earthworm's casting. It was discovered that in 25% of the time, an earthworm was found beneath its casting. He compared this data with laboratory results of harvested castings of a known age. He summarized that the snake did not respond to a casting older than one day. The group also tracked the snakes from the meadow to the river. Results revealed that the snakes traveled the same path consistently through the use of scent trails representing a foraging path and not a specific territory.

Another aspect of the study was the relationship of temperature to aggressive behavior in the eastern garter snake. In a separate publication, Dr. Gillingham read that garter snakes can be aggressive in warmer temperatures. Again, he found little scientific data on record to support this theory. Temperature readings were taken from the slab, beneath the slab and in the surrounding grass. It was revealed that these snakes exhibited a flattening of the body, gaping of the mouth or biting at significantly lower temperatures than previously believed.

Although the evening concluded early as Dr. Gillingham was teaching the next morning and had a long drive ahead of him, his presentation was enjoyable, comprehensible and succinct. Newt looks forward to another wonderful slide presentation by Dr. Gillingham.

We stay in touch, so you stay in touch.

Respectfully yours,

NEWT

Bull. Chicago Herp. Soc. 30(4):79-81, 1995

HerPET-POURRI

by Ellin Beltz

Member's request

"I am planning to build an exhibit hall for reptiles later this year and will be offering a special section for children and their reptile pets. I would appreciate anyone sending in their photos of children of any age handling, playing, feeding, or whatever with their reptile friends. I often bring groups in from various schools and this would help to alleviate any fears about children having pet reptiles. . . . The photos can depict children with any size reptiles under any circumstances;. . . the name, age, and home of each [will be displayed]. Those wishing to participate may feel free to send the photos or call me day or night." Gary Durkovitz, 1420 Richmond Avenue, #2037, Houston, TX 77006, (713) 526-6102.

Sa-fire salamanders?

Columnist William Safire apparently received a lot of mail on his misunderstanding of the differences between newts and lizards. In the January 29, *New York Times Magazine* he quoted his correspondents. I'm only including the sound bites. " . . . giving you a forked-tongue lashing for your definition of newt . . . the metaphorical appeal of a political named after a reptile is obvious . . . as a bona fide amphibian, the newt is slippery skinned and abandons its young. . . newts secrete the neurotoxin tetrodotoxin, structurally the same as the toxin found in the pufferfish." [from Steven Ragsdale]

Amphibian briefs

• A Nature Conservancy preserve in southern Arizona is home to an unusual leopard frog that calls from under water. The frog was discovered breeding in an artificial pond. [*Arizona Republic*, February 19, 1995, from Tom Taylor]

• The Australian golden bell toad is much in the news these days. It seems that one of the reasons Sydney got the 2000 Olympics instead of Beijing was the Australian government's pledge to preserve the environment. Well, right in the middle of the area that is likely to be bulldozed for the games lives this little protected species. An environmental project manager for the games said, "We have already done research to create the perfect frog ponds somewhere else on the site. We have a team of frog experts and advisers and we have a building license from the National Parks and Wildlife Service with the condition that we implement a long-term management strategy for the frog." The frogs are apparently victims of "biological control." Their eggs are eaten by imported mosquito fish; as a result the adults have become rare. [*Chicago Tribune*, February 26, 1995, from Lori King-Nava and Steven Ragsdale]

• *Nature Conservancy Magazine* [March/April 1995, from J. N. Stuart] reports that ranchers in southeastern Arizona have been hauling water to frog ponds by truck in an effort to help the Chiricahua leopard frog. The ponds are actually isolated stock ponds and constitute a "bullfrog-free zone" where the smaller species has a hope of survival.

• *Texas Parks & Wildlife Magazine* [March 1995, from Mark T. Witwer] describes the case of a new resident in Tyler, Texas, who kept hearing a "surprisingly loud series of musical chirps followed by a trill." Puzzled for three years, he finally

caught the culprit—a Rio Grande chirping frog (*Syrrhophus cystignathoides*). These inch-long musicians are apparently doing well in smaller rural areas of Texas, laying eggs in the humus-filled leaf bases of domesticated or ornamental plants. They may have arrived at their new homes by riding along with potted plants from Rio Grande Valley plant nurseries.

• Females of a species of Malaysian tree frog tap their toes to attract mates, according to a presentation at the Acoustical Society of America in Austin, Texas. Researcher Peter M. Narins of UCLA said, "All of a sudden males from the same vegetational mat (would) jump on her. . . . We believe it's the (vibrations), not the sound. . . ." [*Science*, Volume 266, December 16, 1994, from Bill Burnett] Sounds like a Bee Gees song to me.

• Cannibalistic toad tadpoles spit out close relatives according to researchers. This preferential dining on one's distant kin has also been documented in cannibalistic morphs of the tiger salamander. (*National Wildlife*, February/March 1995, from Mark Witwer] Is this a case of *Sic gorgiamus allos subjectatos nunc*, or what?

• From the *Chicago Reader* "The City File," February 17, 1995, by Harold Henderson [clipping from Steve Ragsdale] "Come here often? I SAID, COME HERE OFTEN? 'In other experiments, anurans living near highway noise could not determine the direction of sound sources as well as those living in quieter places,' reports Ronald Larkin in *Illinois Natural History Survey Reports* (January/February). 'The males near highways altered their calling and spaced themselves differently when attempting to attract females. We obtained similar results by playing recorded highway noise from loudspeakers,' thus verifying 'that it was the noise generated by the highway traffic and not other kinds of pollution or indirect causes that affected the anurans.'"

• Herpetologists interested in monitoring amphibians are directed to the following resource persons: Volunteer management/training—Christine Bishop, fax (905) 336-6434, email u063@csx.cciw.ca; Calling-amphibian surveys—Sam Droege, fax (202) 273-0825, email droeges@mail.fws.gov; Tadpole and salamander larva identification material—Roy McDiarmid, fax (202) 357-1932, email mnhvz056@sivm.si.edu; Validating larval surveys—Doug Johnson, fax (701) 252-4217; Desert amphibian surveys—David Bradford, fax (702) 798-2208, email msddfb@vegas1.las.epa.gov; and Terrestrial salamander surveys—Brad Shaffer, phone (916) 752-2939, email hbshaffer@ucdavis.edu. If you would like to be on the email address list for the North American Amphibian Program, email Sam Droege at droeges@mail.fws.gov. [*Froglog*, December 1994, number 11]

• New herpetological conservation newsletter available for both amateur and professionals interested in amphibian and reptile conservation: contact Amphibian and Reptile Conservation, 2255 North University Parkway, Suite 15, Provo, UT 84604-7506, phone (801) 371-8457, fax (801) 373-0695 or email craig@infonaut.com or craig.hassapakis@m.cc.utah.edu.

• "Hello my honey, hello my baby" hello my new TV network? Michigan J. Frog, a "song-and-dance amphibian" who starred in a 1956 Chuck Jones cartoon called "One Froggy Evening" is the spokes-frog for the new Warner Brothers television network. His creator said, "I only made the one cartoon with him, and it was probably the best-known single cartoon that I ever made. I've ended up spending the last 30 or 40 years trying to figure out how to make another one. But we are making it, calling it 'Another Froggy Evening.' It will be Michigan J. Frog through history, his effect on history. Eventually it will go on television, but it's not designed for that purpose. All of our cartoons, from the time I started as a director in 1937 until the present were made for theaters." [*Chicago Tribune*, January 19, 1995, from Steven Ragsdale]

• A bookstore owner in Lake Zurich has gathered some really old cookbooks in reprint. One recipe is for baking frogs live in a pie. The book, titled "The Accomplisht Cook," written in 1685 by Robert May, claims that when the pie is opened, the frogs will leap out and "make the ladies to skip and shreek." [*Chicago Tribune*, January 19, 1995, from Steven Ragsdale]

• The well-known rock group Pearl Jam is putting some muscle into the anti-frog dissection/vivisection movement. They're paying for an 800 number (1-800-95FROGS) for students who wish to get information on how to stop dissection in their schools. The first 50 students to return completed student petitions will be eligible for Pearl Jam stuff like T-shirts, posters, or autographed albums. [*Chicago Tribune*, January 31, 1995, from Steven Ragsdale, and February 21, 1995: Memphis, TN *Commercial Appeal*, from Bill Burnett and the Indiana *Post-Tribune*, from Jack Schoenfelder]

• The *Houston Chronicle* [March 12, 1995, no contributor's name] reports that the U.S. Fish and Wildlife Service says it will delay its decision on whether to list the Barton Springs salamander under the endangered species act after receiving a request from Texas Governor George W. Bush to delay any decision for six months. Governor Bush said the state needed time to develop a plan to protect water quality in the Barton Creek watershed.

• Frogs with six legs were found in the radiation zone around Chernobyl by a Russian research biologist who died recently of leukemia. Alexei Gostyev studied the area around the Chernobyl "ghost zone" which has been uninhabited since the number 4 reactor at the power station exploded and covered the surrounding area with radioactive debris in the spring of 1986. [*Chicago Tribune*, November 25, 1994, from Steven Ragsdale]

Snake, rattle and droll

• Ohio bikers, conservationists, and state officials are going head to head over an issue that appeared to be a "no-brainer" when originally proposed; the building of an 11-mile bike trail on an abandoned railroad bed in southwestern Ohio. Work on the $1.3 million federally funded project has been halted until the state can find a way to protect the eastern massasaugas which are fond of basking on the abandoned rail line. Now mountain bike nuts are mad that "their" project may be delayed. [Akron, OH *Beacon Journal*, January 23, February 15,

and 23, 1995, all from Jim Zimmerman]

• The Boscobel, Wisconsin, *Dial* reports that two "classic outdoorsmen" passed away in early February: "Whether leading television and newspaper crews on rattlesnake hunting expeditions, or showing off immense beaver pelts and ginseng roots, both . . . led exciting lives intertwined with the great outdoors. . . . He was probably best known for his uncanny ability to locate and capture elusive timber rattlesnakes. . . . One year alone he captured 5,700 scouring the rocky bluffs of Crawford County." [February 9, 1995, from Maggie H. Jones]

• "Actress Bo Derek vividly remembers the day her main squeeze almost killed her. It wasn't [her] devoted hubby . . . but a giant boa constrictor that nearly wrapped up her career." While filming *Tarzan,* "the snake is supposed to drop out of a tree onto me and start to coil around me while I scream and struggle to get free," she said, "At first, this snake was frightened. . . . I would scream and shout and then take a deep breath. What I didn't realize was that each time I breathed in, the boa constrictor was imperceptibly tightening around me, and every breath was getting shallower and shallower." [*The Star*, January 10, 1995, from Steven Ragsdale]

• "Pardon me madam, but did you know your clothes were crawling?" Headline writers worldwide had a great time with the poor Swedish woman who tried to smuggle a bunch of baby snakes into her country to start a reptile farm. The Memphis *Business Journal* [February 6-10, 1995, from Bill Burnett] reports: "No comment appeared in the news item about the size of the snakes or the size of the garment, so we are left to wonder whether this was indeed a wonder bra. Other salient details not reported . . . are the fate of the reptiles, the manufacturer of the garment . . . and whether any international lingerie rights groups are planning to become involved on the accused's behalf."

• Strict new laws have been enacted in Thailand, which may prevent indigenous snake hunters from collecting king cobras and other snakes to sell for food. A village chief, who has won government awards for his model administration and income-generating schemes, said that snakes were the main source of income for his community. A king cobra brings $12 from restauranteurs. [Memphis, TN *Commercial Appeal,* February 21, 1995, from Bill Burnett]

• The Sweetwater Jaycees are apparently trying to justify their rattlesnake roundups based on research. An article in the Abilene, TX *Reporter-News* [March 12, 1995] goes on to say that a study by Texas A&M University showed that "roundups have a negligible effect on the rattlesnake population." Ken Higdon, the president and CEO of the Temple Chamber of Commerce 200 miles from Sweetwater, said that no roundup will ever rid an area of snakes, which is why the protesters quit coming a few years ago. By midafternoon Saturday, 1,500 pounds of snakes had been turned in. Even Higdon admitted "our poundage is down," but he blamed it on aberrant winter weather. CHS member Bob Sears wrote a letter to the editor of that paper responding to their article: "The Jaycees promote their roundup as 'educational.' According to 'Texas Rattlesnake Roundups,' a study by . . . A&M University, 1991, . . .'Educational programs conducted at all five of the roundups [including Sweetwater] had negligible affects on knowledge change among spectators.' Even their safety advice to children is highly suspect. . . . The Sweetwater Rattlesnake Roundup is a promotional money-making carnival and sideshow that uses rattlesnakes as the come-on gimmick. For the Sweetwater Jaycees to claim that they educate and do research on reptiles does a great disservice to the herpetologists, biologists, and teachers of the world that actually do."

• A lawsuit was filed in Lackawanna County Court seeking more than $250,000 in damages against a local pet shop, the owner thereof, and an insurance company. The brief alleges "suddenly, the menacing creature (a python) sprang from the hands of the salesman and dug its fangs into the nose of the 2-year-old child. . . ." The 1992 experience reported left the child so "emotionally and psychologically" upset that she "intentionally burned down her family residence after her mother attempted to place her in her own bed," according to attorney Roger Mattes Jr. [Carbondale, PA *News*, March 8, 1995, from Gary Durkovitz]

• A new book, *Salvation on Sand Mountain: Snake Handling and Redemption in Southern Appalachia*, has been published by Addison-Wesley. The book was written by Dennis Covington, a southern Appalachian native who covered the trial of the snake-handling preacher accused of trying to murder his wife by snakebite. The preacher was found guilty and sentenced to 99 years in jail. Covington felt there was more to the snake handling sects than had been brought forward at the trial and so began to work on the book. [*Houston Chronicle*, March 12, 1995, from Gary Durkovitz]

• Recent flooding in California has washed up all kinds of odd debris, including snakes, on California beaches. Twenty-six snakes, mostly venomous, were removed from Del Mar Beach and four others from Solana Beach. Both beaches are near San Diego. Snakes are not rare sunbathers in southern California, but they are usually relocated by "lifeguards" more accustomed to hauling other types of vertebrates. [Las Vegas *Review-Journal* and Las Vegas *Sun*, March 11, 1995, from Bob Pierson; and Houston *Chronicle*, March 12, 1995, from Gary Durkovitz]

Next month . . .
Lizards, turtles, and crocodiles in the news!

Thanks to everyone who contributed to this column and to Garrett Kazmierski, J. N. Stuart, and Gary Durkovitz for stuff I didn't use. You can contribute, too! Send clippings with date/publication slug and your name (address label) firmly attached with tape to: Ellin Beltz, 1647 N. Clybourn Avenue, Chicago, IL 60614-5507. Letters and comments (no images) can be emailed to uebeltz@uxa.ecn.bgu.edu.

Herpetology 1995

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editors assume full responsibility for any errors or misleading statements. JCM

DIPLOID–TETRAPLOID GRAY TREEFROG HYBRIDS

H. C. Gerhardt et al. [1994, Copeia (1):51-59] document the first cytologically confirmed natural hybrids between the diploid *Hyla chrysoscelis* and tetraploid *Hyla versicolor*. The hybrids are two triploid males initially detected by their distinctive calls. Analyses of the pulse-repetition rate and shape of the advertisement calls of these triploid hybrids suggest that one of the two previously reported putative hybrids was a hybrid and the other male was a *H. chrysoscelis*. The calls of the field-recorded hybrids are intermediate in pulse rate in comparison to the parental species and significantly different in structure from the calls of laboratory-reared hybrids described by Mable and Bogart (1991). Mated pairs were collected in six syntopic populations in south-central Missouri. Of the 75 pairs in two of these ponds, five (about 6.7%) were mismated. The rarity of sexually mature hybrids, despite the fairly high frequency of mismatings in at least two localities, indicates severe selection against hybrids. In four of the five mismated pairs, the female was *H. versicolor*. Analyses of mtDNA sequences shows that the female parent of the two cytologically confirmed natural hybrids was also *H. versicolor*.

LOGGERHEAD HATCHLINGS AND ARTIFICIAL LIGHTING

A. Peters and K. J. F. Verhoeven [1994, J. Herpetology 28(1):112-114] monitored 23 loggerhead, *Caretta caretta*, nests on the western side of the Göksu delta near the town of Silifke on the Turkish Mediterranean coast. A total of 820 hatchling tracks were counted and the direction the hatchlings took determined. In this study 63% of the hatchlings did not take the correct course to the surf when 10 m away from the nest. Instead, they crawled toward the artificial lighting of a paper factory and street lights. Thus, photopollution has potentially disastrous effects on the long term survival of this sea turtle population.

A NEW DWARF GECKO FROM OMAN

A. S. Gardner [1994, J. Herpetology 28(2):141-145] describes *Asaccus montanus* from the Saiq Plateau at about 1900 m elevation, Jebel Akhdar, Sultanate of Oman, Arabia. Its small size, maximum SVL 39.4 mm, extreme degree of tuberculation on the occiput, neck, back, tail and limbs, and its relatively coarse scalation distinguish it from other members of the genus. The type locality is a small, rocky valley with temporary water pools in the *Monotheca–Olea–Dodonaea* vegetation zone. The three specimens were caught between 2130 and 2330 h at an air temperature of 15°C. The three specimens found at the type locality were on level ground at the base of limestone slabs, on the underside of a rock overhang, and on a vertical cliff 2 m above the wadi floor. This is the fourth species to be recognized in the genus *Asaccus*.

UNUSUAL BEHAVIOR IN A PARACHUTING FROG

W. E. Roberts [1994, J. Herpetology 28(2):193-199] reports that the Neotropical frog *Agalychnis saltator* gathers in spectacular breeding aggregations on lianas above temporary swamps. Both males and females descend to breeding aggregations by parachuting and return rapidly to the canopy by hand-over-hand locomotion up lianas. Amplecting males are no different in size from single males, and the sizes of males and females in amplexus are not correlated. Unusual characteristics of this species compared to congeners include egg-laying during daylight hours and laying grey eggs that are packed into moss on lianas. Sources of egg mortality include desiccation, submergence in water, and predation by ants, snakes and birds. Parachuting and walking may both be efficient locomotor modes that enable frogs to live in the dispersed habitat of the canopy and yet gather in a short amount of time for explosive breeding at isolated ponds.

A NEW CRYPTOZOIC SNAKE FROM VIETNAM

V. Wallach and G. S. Jones [1992, Cryptozoology 11:1-37] describe the Vietnamese sharp-nosed snake, *Cryptophidian annamese*, from Quang Nam-Da Nang Province in central Vietnam. The new snake's description is based upon three color slides taken of the type specimen in 1968. The holotype is presumed lost. The snake exhibits several unusual features, such as a depressed snout with a pointed rostrum, greatly reduced concave nasal shields separated from the rostral, large preorbital shield in place of a loreal and preocular, large temporal-like postoculars, a temporolabial shield and a short tail. No other Southeast Asian snakes are known to have this unusual morphology, and no other genus of snakes in the world compares in all respects with this new taxon. Its relationships are therefore highly speculative. A comparative analysis with other sharp-nosed burrowing snakes suggests that it shares the most similarities with *Myersophis* of the Philippines, *Lycophidion* of Africa, and *Emmochliophis* of Ecuador. Its family affinity is unknown at present.

A NEW SPECIES OF COLUBRID SNAKE FROM HONDURAS

P. A. Holm and G. A. Cruz D. [1994, Herpetologica 50(1): 15-23] describe *Rhadinaea tolpanorum* from a cloud forest in northern Honduras. The new species is a member of the *godmani* species group and is distinguished from other members by the presence of 17 dorsal scale rows and other distinctive characteristics. The type locality of this species lies within the boundaries of a proposed wildlife refuge, Refugio de Vida Silvestre Texiguat, which includes a nuclear zone comprising all terrain above 1800 m in elevation and covers about 1300 ha. This snake is one of four undescribed species of herpetofauna recently discovered in the area.

Unofficial Minutes of the CHS Board Meeting, March 17, 1995

Marcia Rybak called the meeting to order at 8:16 P.M. Board members Brian Jones and Mike Ross were absent.

Officers' Reports:

The minutes of the February board meeting were read, corrected and approved. The Treasurer's Report was read and approved. Current CHS membership is 1,751. Chris Lechowicz signed up five new members at the last Streamwood swap meet.

Committee Reports:

Legislative: Chris Lechowicz has written an article to appear in a future *Bulletin*, and has submitted it to the Illinois Department of Conservation for comments. Joan Moore reported a major assault on the Endangered Species Act, in the form of legislation passed by the U.S. House of Representatives today. The legislation would institute a 6-month moratorium on naming any new species to the Endangered Species List.

Shows: Ron Humbert and Jack Schoenfelder did an all-day educational presentation on February 8 at Phillips School in Ford Heights. Char Haguewood and Marcia Rybak participated in Fermilab's Careers in Science day for female high school students. Ron Humbert will do a presentation at a school in Oak Park this coming week. The Cook County Forest Preserve District's Environmental Awareness Exposition in conjunction with National Trails Day is scheduled for June 11 from 9 A.M. to 2 P.M., at the Little Red Schoolhouse Nature Center. The CHS will have two tables there.

Raffle: The new Raffle chair is David Beamer.

Expo: Ron Humbert reported that the CHS has signed the contract to hold the Expo at Triton College in River Grove, and has paid half of the fee for the facility. Letters have gone out to vendors who may be interested in having tables at the Expo.

Adoptions: Char Haguewood reports that all available animals have been adopted at this time.

Workshops: Nicole Marrello reported that the first workshop was held March 4 at the Grove Nature Center. Thanks to Steve Swanson for use of the facility and to Cheryl Roge, DVM, for leading the workshop. The next parasitology workshop will take place on May 7 at The Grove. Other workshops being planned are: cage and filtration design, incubation, health and care of iguanas (to be run by Mike Miller, DVM), and vivarium plants and animals. Interested persons should contact Nicole Marrello.

Old Business:

Facility: On March 8, Marcia Rybak, Mike Dloogatch and Ron Humbert met with Field Museum representatives Harold Voris, Curator of the Division of Amphibians and Reptiles; Peter Crane, Vice President of Academic Affairs; and Laura Gates, Vice President of Museum Affairs. Marcia gave a presentation designed to demonstrate that the museum's relationship with the CHS is beneficial to the museum, and to suggest ways in which we can work more closely. Some suggestions were for the CHS to give educational programs at the museum or participate in museum events, for the CHS to publicize Museum events in the *Bulletin*, or for the CHS to earmark one of its annual grants for a museum researcher.

Marcia Rybak reported that the presentation went very well. The CHS representatives were also introduced to Cynthia Gulley, Special Events Coordinator at the Museum, who suggested the CHS reserve Montgomery Ward Auditorium for the next two years. Meanwhile, she will reexamine that auditorium's availability for 1995. The CHS is currently scheduled to meet in the Montgomery Ward Auditorium, rather than the larger and more costly Simpson Theater, for April, May and June of 1995.

The museum is very concerned about the presence of live animals, particularly endangered or regulated species, in the building. The CHS will enforce a strict policy of no live animals at meetings.

Marcia Rybak also met with Neil Davis, Vice President of Operations at Lincoln Park Zoo. The zoo will be remodeling its auditorium in 1996. Use of the meeting space until that time would cost $100/use. We would also be required to sign a hold-harmless waiver and provide proof of insurance coverage.

New address for the CAS: Construction of a new museum building for the Chicago Academy of Sciences has been approved by the Chicago Planning Commission. At the request of the CAS, and on behalf of the CHS Board, Jill Horwich wrote a letter to the Commission, supporting the new location. At present, the Academy's business address is 2060 N. Clark, Chicago, Illinois 60614. Mail addressed to 2001 N. Clark is delivered to the 2060 location. The CHS will switch to the 2060 address when new letterhead is purchased.

Director of Sales:

Joan Moore reports that the CHS bookstore is in the black. Although we are not permitted to sell books at the Audubon Society's conference on Urban Wilderness, Joan Moore will distribute booklists and membership brochures at that event.

New Business:

New Officers: Marcia Rybak has appointed Chris Lechowicz to fill the vacant position of Vice President. Mike Dloogatch moved and Jill Horwich seconded that the Board approve this appointment. The motion passed unanimously. Marcia Rybak then appointed Nicole Marrello to fill the Member-at-large position vacated by Chris Lechowicz. Jill Horwich moved and Claus Sutor seconded that the Board approve this appointment. The motion passed unanimously. Both appointments are subject to ratification by the general membership at the next meeting.

NHA: Mike Dloogatch moved and Jack Schoenfelder seconded that the CHS donate the stuffing of National Herpetological Alliance membership/informational fliers into the March issue of the *Bulletin*, at a cost of approximately $50. The motion passed with Jack Schoenfelder voting against and Jill Horwich abstaining.

Round Table:

Ron Humbert and Brian Jones have been working on a solution to the answering machine problem. A discussion was held regarding various options for phone answering systems.

The meeting adjourned at 9:52 P.M.

Respectfully submitted by the Recording Secretary,
Jill Horwich

Chicago Herpetological Society
Statement of Income and Expense

	1994		1993	
	INCOME	EXPENSE	INCOME	EXPENSE
Membership	40,334.50	2,584.11	39,230.46	3,129.60
Telephone		186.24		186.24
Members' Handbooks		1,751.24	2.50	
Membership List	48.00		72.00	
Miscellaneous Postage		253.00		261.00
Monthly Programs		1,830.52		2,681.33
Supplies and Equipment	79.98	2,723.02		760.43
Books and Merchandise:				
Sales	58,259.84	46,795.77	85,588.05	63,684.99
Salary		7,199.50		15,080.04
Payroll Taxes		2,676.05		5,813.41
Bulletin:				
Printing & Postage		33,394.59		37,436.32
Back Issues	111.77		523.50	
Advertising	1,772.25		1,900.75	
Raffle	2,089.00		2,144.03	252.75
Board Meetings		240.00		300.00
General Meetings		5,203.28		3,536.56
CHS Expo	9,339.42	7,711.82		
Shows	2,466.00	1,231.88	2,376.00	
Grants	100.00	2,000.00		3,842.00
Picnic		25.00		70.80
Donations	380.00	335.95	526.00	246.70
Refreshments	100.00	23.71	154.53	46.71
Library		393.65		264.88
Miscellaneous		32.45	253.93	206.50
Interest	420.70		274.96	
Returned Checks	65.79	87.79	136.08	225.73
Insurance		825.00		1057.00
Awards		237.34		204.38
Field Trips	2,625.00	2,600.00	2,630.00	2,542.20
	118,192.25	120,341.91	135,812.79	141,829.57

Cash as of 31 December 1993	**$27,132.15**
1994 Income – 1994 Expense	(2,149.66)
Illinois sales tax collected in 1994	1,967.12
Illinois sales tax paid to state in 1994	(2,764.00)
Cash as of 31 December 1994	**$24,185.61**

Advertisements

Accrue more herpetological knowledge: Connect with your peers throughout North America and abroad. The HERPETOLOGY ONLINE NETWORK is active 24 hours/day. Any computer modem can access Herp-Net via (215) 464-3562 (300–1200 baud 8-N-1) or (215) 698-1905 (9600+ V32, V42bis.) Submit news via FAX: (215) 464-3561 any time.

Attention: the Varanid Information eXchange is a society of herpetoculturists sharing an interest in MONITOR LIZARDS. Members receive the bimonthly newsletter, *VaraNews*. Annual membership is: U.S., $10; foreign, $12 surface/$15 air. For a free copy, send a legal-size SASE to: Varanix, 8726D S. Sepulveda Boulevard, #243, Los Angeles CA 90045.

For sale: **HIGH QUALITY FEEDER ANIMALS** PRODUCED FROM THE BEST LAB DIETS AVAILABLE. Tenth year of production and supply of frozen feeder animals. All feeders can be removed one at a time from the bag; they are not frozen together. All orders **will arrive frozen**. Now offering *seven* sizes of mice: small newborn pinks, medium size pinks, large fuzzy pinks, extra large fuzzies/small hoppers, juvenile mice, young adults, and large adults. Also available are pinkie rats, baby chicks, and quail chicks. Orders sent special delivery, postage extra. **Free pricelist**. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358, after 6 P.M. Central Time on weekdays, all day Saturday and Sunday.

For sale: *THE GOURMET RODENT*: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, 6115 SW 137th Avenue, Archer FL 32618, (904) 495-9024.

For sale: top quality mice, rats and Chinese dwarf hamsters. All sizes at competitive prices. Gary W. Allison, 919 Wyandotte Street, Bethlehem PA 18015, (215) 974-8975.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, $.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: high quality feeder mice. Shipped UPS Next Day Air. All mice are properly processed to insure a quality product. Fourth year of production and supply of frozen feeder mice. Prices: pinks, $25/100; fuzzies, $30/100; weanlings, $35/100. Also available are 4 oz.+ rats, $100/100. Quantity discounts available. The Mouse Factory, P.O. Box 85, Alpine TX 79831, (915) 837-7100, Ray Queen.

For sale: rodents and reptiles, Dallas–Ft. Worth Metroplex. J.R.'s Cowtown Critters, 1002 Harrison Avenue, Arlington TX 76011, (817) 460-RATS.

For sale: In stock, Flex-watt and Ultra-therm heating products. **Frozen rodents** always available. Mice: pinks–crawlers, 3/$1; weanlings, 40¢; subadult, 50¢; adults, 65¢; large adults, 75¢. Rats: small, 85¢–$1; medium, $1.25–2.00; large, $2.25–2.75; jumbo, 3/$10. Call on quantity discounts [note: discount on orders picked up at CHS meetings]. Live rodents available at higher prices. **Available now**: updated fall newsletter/catalog—many unique/hard-to-find herp husbandry items. It's also baby snake season! Send business-size SASE for catalog, or call. Scott J. Michaels, D.V.M, Serpent City, P.O. Box 657, Island Lake IL 60042, (815) 363-0290.

For sale: Feeder frogs. Twenty *Hyla* and/or *Rana* sp. for $20 postpaid. Send money order to: Terry Dillon, 30012 Hubert Jenkins Road, Bogalusa LA 70427.

For sale: SUPERWORMS, *Zophobas morio*, ultimate food for reptiles, birds, fish; $18.95/lb., plus $3 shipping. Keeps 8–10 months at room temperature, far less chitin for complete digestability. Send SASE for information to Joe Sutter, P.O. Box 59119, Birmingham AL 35259, (205) 871-5570, 4 P.M. - 7 P.M. Central Time.

For sale: GREAT FEEDER INSECTS! King mealworms at great prices (wholesale/retail). Quantity discounts. *Place your order today!* North County Exotics, P.O. Box 4856, Salinas CA 93912-4856, (408) 663-0566, please leave message.

For sale: turtle and tortoise chow, excellent food—1 lb, $5; 3 lbs, $10; 5 lbs, $15 (postage paid). Send cash, check or money order to Herp's Delight, Dept. C, 20 Ablett Avenue, Whitesboro NY 13492.

For sale: reptile cage disinfectant and deodorant. Kills many types of infectious disease detrimental to herps. $3.91 for 2 oz (makes 1 gallon). Wholesale and quantity prices available. Make checks payable to Bengal Pets, Inc., 1088 Chapman Road, Jesup GA 31545, (912) 530-6384.

For sale: 3′ "alligator" tongs, $50; pinky pump, $40; 12″ curved hemostats, $50; Pearlco ceramic heat elements, 100w and 60w, $10 each. (703) 524-7323, please leave message. [D.C.]

For sale: Tired of getting bitten while collecting, feeding or maneuvering animals? Try my Whitney tongs—10% discount to herp society members—2′, $65 each; 2½′, $66 each; 3′, $67 each; 3½′, $68 each; 4′, $69 each, 5′, $85 each; 6′, $90 each. Will ship U.P.S. extra. Send money order or cashier's check to Don Lunsford, 5661 Walkerton Drive, Cincinnati OH 45238.

For sale: 1995 HERPETOLOGICAL DIRECTORY. Valuable information source containing private and commercial breeders, wholesalers, foreign exporters, U.S. and foreign herp societies, food sources, supplies, publications, more. . . . $15. MC/Visa. Great Valley Serpentarium, 2379 Maggio Circle, Unit C, Lodi CA 95240, (209) 369-7737.

For sale: 70 issues of the *Bulletin of the Chicago Herpetological Society*, October 1988 (Vol. 23, No. 10) to October 1994 (Vol. 29, No. 10), no duplicate issues, $150 postpaid in the U.S.; *Snakes: The Keeper and the Kept* by Kauffeld (1969), very good condition with dust jacket, $40; *Snakes and Snake Hunting* by Kauffeld (1957), ex-library, good condition, lacks dust jacket, $30. International Herpetological Symposium on Captive Propagation & Husbandry proceedings: No. 7, $65; No. 8, $45; No. 9, $65; No. 12, $65; No. 13, $60; all in excellent condition. Include $5 shipping for any books or IHS proceedings. Ohio residents add 5¾% sales tax. The Herp House, 1750 Haines Road, Orwell OH 44076, (216) 685-4615 tel, (216) 685-4572 fax.

For sale: herp books. *The Amphibians and Reptiles of Botswana* by Auerbach (S), $75; *The Last of the Ruling Reptiles* by Neill, $80; *Monograph of the Snakes of Japan* by Maki, 3 vols., $465; *The Cold Blooded Australians* by Schmida, $60; *Rattlesnakes* by Klauber, 2 vols., 1972 edition, $300; *A Guide to the Snakes of Uganda* by Pitman, 1974 reprint, $275. Other titles available and I am always interested in acquiring new titles. Make check or money order to Keith Neitman, 11415 Longbrook, Houston TX 77099.

For sale: collection of 120 different outdated antivenom/snakebite kits from all over the world, $600. Also, collector's item—snake catching box made and used by Carl Kauffeld. This is the box Carl used on his collecting trips to South Carolina, 30″l x 20″h x 12″w, three compartments, top opens and two side compartments. Box was never cleaned out and still has (unsoiled) *Staten Island Sunday Advance* newspapers dated April 17, 1977. See book *Snakes and Snake Hunting* for picture of box, $500. Steve, (516) 957-3624. [NY]

For sale: set of five posters first published by Army Air Forces Tactical Center for easy identification and habits of venomous snakes of the world, $9 postpaid; *Field Guide to the Snakes of South Vietnam* by Simon Campden Main, $10 postpaid; *Batrachia of North America* by E. D. Cope, $16 postpaid; *Laboratory Anatomy of the Iguana* by J. C. Oldham and H. M. Smith, $17 postpaid; *Time of the Turtle* by J. Rudloe, $5 postpaid; *Atlas of Amphibians and Reptiles of New Zealand* by C. P. Pickard and D. R. Towns, $18 postpaid. Catalog of over 4000 herpetological titles sent free upon request. Herpetological Search Service & Exchange, 117 E. Santa Barbara Road, Lindenhurst NY 11757, (516) 957-3624.

Advertisements (cont'd)

For sale: large selection of captive born reptiles and amphibians, books and supplies. Send S.A.S. business-size envelope for complimentary price list or $5 for a 1 year subscription (bi-monthly), to Twin Cities Reptiles, 540 Winnetka Avenue North, Golden Valley MN 55427, (612) 593-0298.

For sale: three stackable cages with stand (35″ × 18″ × 18″), with sliding glass doors, vents and access holes, attractive and functional, $160 for all three; rosy boa, 1–2 years old, $90. Marc, (708) 597-6172 weekday evenings.

For sale: c.b. frilled dragons, 6 months old, $750 each. Dan or Phil, New York Reptilia, Inc., (718) 461-1371 tel, (718) 461-0749 fax, closed Mondays.

For sale: one male and two female Australian velvet geckos, *Oedura monilus*, c.b. '92, $350. Gary Fogel, (312) 935-6938.

For sale: c.b. bearded dragons (*Pogona vitticeps*), high-contrast patterns and exceptional colors, $75 each. Also c.b. geckos—velvet geckos (*Oedura monilus*), $125 each; giant frog-eyed geckos (*Teratoscincus keyserlingi*), $95 each. Philip A. Tremper, Jr., P.O. Box 264, Clintonville WI 54929, (715) 823-5873.

For sale: *Hydrosaurus weberi*, $50; bluetongue skink, $150; *Varanus rudicolis*, $170; *Liasis bourtoni*, $60; *Candoia aspera*, $55; *Gonyosoma oxycephala*, $45. Dr. Brian Kimball, UPSCALE REPTILE, (214) 256-3098. [TX]

For sale: rhinoceros iguanas; Cuban iguanas; green iguanas; *Geochelone sulcata*; *G. elephantopus* (Florida sales only). D. J. or Sam, (305) 680-8492. [FL]

For sale: six elongate tortoises, *Indotestudo elongata*, c.h. spring '94, 3″+, $85 each. Lynn Dickason, (918) 747-7523 (o) or (918) 742-3449 (h). [OK]

For sale: adult African spurred tortoises (*Geochelone sulcata*). If you are considering working with this species, or want to add to an existing collection, please give me a call. Specimens available now. (909) 780-0715. [southern CA]

For sale: large male African spur-thighed tortoise, 6 years old, c.b., A+ condition. Nancy Gordon, (815) 485-6642. [Mokena IL]

For sale: expected this year: anerythristic Honduran milksnakes, $600; large selection of locality-bred *alterna*—Langtry, Loma Alta, Juno Road, Christmas Mountains, La Linda, $75–250; *knoblochi*, $300; Andean milksnakes, $300; Stuart's milksnakes, $125; pin-striped *annulata*, $100; Val Verde County *annulata*, $75; Argentine boas, $250. "The Geographic Variation of the Gray-banded Kingsnake," a color poster, $10 each + $2 shipping. Send SASE for free price list. Dan Johnson, P.O. Box 440893, Houston TX 77244, (713) 589-1874.

For sale: one male and one female Arizona mountain kings, c.b. '93, $325/pair; one male and one female grey-banded kings, Blair's phase, c.b. '93, $400/pair. Also quality c.b. colubrid snakes and lizards (leopard geckos, blue-tongue skinks, bearded dragons) available in '95. Call for a free price list. Eric Chung, (305) 279-1197. [FL]

For sale: two male and two female Nelson's milksnakes; one male and two female red milksnakes; one male and one female trans-Pecos rat snakes (subadults); two male and two female Pueblan milksnakes (female apricot); female anerythristic red rat snake; female "motley mutant" red rat snake; female banded California kingsnake; two male gray-banded kingsnakes (subadults); male tricolor Honduran milksnake; female red rat snake; seven baby Colombian boas. Also various red rat hatchlings from '94 (some strange). All reasonable offers considered. All healthy and most adults proven breeders. No trades. Lester, (312) 237-0574.

For sale: by June, the following corn snake (*Elaphe g. guttata*) hatchlings. New Jersey stock, a small slender snake with lots of orange and red, delicate in appearance but very hardy, $50/pair; Delaware stock, these animals can grow up to 5′, get heavy-bodied like an *obsoleta*, good amount of red and orange, $40/pair; "red" corns, produced from my Maryland male (a handsome red devil) and my beautiful Charleston female (which will blow away **any** Okeetee), $30/pair. Hope to be producing some beautiful, very hard to obtain pine snakes next year. Inquire if interested. Bart Bruno, (203) 773-9257.

For sale: available now, all c.b.&b. stock. Andean milksnakes, $300 each; Borneo blood pythons, $130 each; two male white-lip pythons, $175; Macklot's pythons, $100 each; two male and one female Louisiana pine snakes, $300 each; b&w California kingsnakes, $50 each; desert kingsnakes, very nice, $40 each; male Baird's rat snake, $30. Write or call for price list and additional info. Terry L. Vandeventer, Arco Iris Herpetoculture, 1016 Andover Street, Clinton MS 39056, (601) 924-1409.

For sale: beautiful 5′ female emerald tree boa, very manageable, $600; 7′ male coastal carpet python, beautiful, $300; 3′ male Suriname boa, long red tail, $325. Bob Futo, (708) 307-0879.

For sale: from GAINES REPTILES, INC. 15% discount on orders placed before June 15, 1995. Deposits still being taken on 1995 c.b. snakes and Australian skinks. Albino boa constrictors, anerythristic boa constrictors, Brazilian rainbow boas, spotted pythons, albino Querétaro kingsnakes, Tarahumara mountain kingsnakes, San Pedro mountain kingsnakes, San Bernardino mountain kingsnakes, Durango mountain kingsnakes, northern blue-tongue skinks, pink-tongue skinks, and other choice species for the discriminating collector and investor. Also, I am selling my personal group of 1994 yearling green tree pythons. For 1995-96 price list send $2 and business-size SASE to: Gaines Reptiles, Inc., c/o Bill Gaines, 6 Pine Tree Lane, Trafalgar IN 46181, (317) 261-8417 or (800) 689-3040.

For sale: one male and one female Borneo blood pythons, proven breeders, female should be gravid, $375/pair; two male and two female Dumeril's boas, c.b. '92 and '93, $900/pair; two male and one female black-tailed cribos, c.b. '93, 5′+, $175 each. Call (816) 252-1293. [MO]

For sale: one male and two female albino labyrinth Burmese pythons, c.b. '94, Mark Bell stock, beautiful, $1500 each or $3750/trio; one male and one female Sumatran blood pythons, c.b. '94, very pretty, tame, 18″, $550/pair; two male and two female smooth-scaled sand boas (*Eryx johni*), adult breeders, $200 each or $725/group; two female smooth-scaled sand boas, c.b. '92, ready to breed this season, nice, $175 each; three male Kenyan sand boas, c.b. '91 & '92, all are proven breeders, $65 each. Call (619) 287-3937. [San Diego]

For sale: pair of Mexican rosy boas (*Lichanura t. trivirgata*), c.b. '93, $180.

For sale: 6½′ female boa constrictor, proven breeder, $300. Jack Phillips, (708) 724-4552.

For sale: 6½′ male common boa constrictor, nice disposition, golden body color, $75. Ralph, (708) 205-9890.

For sale: **Brazilian rainbow boas** expected from beautiful orange parents, $250. Send stamp for info/photo. Scott Schuett, 1820 Bigelow, Toledo OH 43613.

For sale: male diamond python, c.b. '93, with paperwork, $3000; 5′ male red phase Malayan blood python (*Python curtus brongersma*), c.b. '91, $350; three male Madagascan ocelot geckos (*Paroedura pictus*), c.b. '94, blond phase 2–6 months old, $45 each; two male and one female boa constrictors, c.b. '93, $400/group; male albino Burmese python, possible hetero for albino–green, c.b. '93, $185; one male and one female 9′ Burmese pythons, c.b. '92, $200/pair. Steve Bostwick, (515) 967-5716. [IA]

For sale or trade: c.b. '94 male Colombian redtail boa, full stripe, $1250; c.b. '94 female Colombian redtail boa, partial stripe, very pink, $500; c.b. '94 female Costa Rican milksnake, $250; male Costa Rican milksnake, long term (1½ yrs), 4½′, $250; male anerythristic Colombian redtail boa, import 2/94, unrelated to any U.S. stock, $500; one male and one female leopard tortoises, long term (3 yrs), $125 each; c.b. 8/94 Central American cribo, $250. Trades considered for c.b. northwestern Peruvian boas, Bolivian boas, Dumeril's boas, jungle carpets, alpine blue-tongues and red tegus. Charles, (805) 388-4987. [CA]

Advertisements (cont'd)

For sale: must sell my pair of beautiful boa constrictors. Large, fat, healthy and happy animals to a good home or breeder only, $275 for both. Jim, (708) 566-6523.

For sale: captive-bred snakes. Blood pythons, ball pythons, Burmese pythons, Kenyan sand boas, corn snakes, Illinois bull snakes. Will deliver in Chicago metro area or ship from O'Hare Airport. Joan Moore, (312) 528-4631.

Free: Sample copy of the Tortoise Shell Newsletter. Send name and address to Tortoise Shell, P.O. Box 8181, Flint MI 48501.

Free!!! NATION'S LARGEST CATALOG of reptile and amphibian supplies at the guaranteed lowest prices. Big Apple Herpetological's 48-page catalog includes incubators, cages, heating, digital thermostats & themometers, lighting, cage accessories, husbandry & feeding/dosing equipment, medications, vitamins, foods, herp shirts and books. We also sell a large variety of reptiles. For FREE catalogs and product orders: (800) 666-6672. For product information: (212) 799-9065. For reptile information and sales: (212) 799-5231. Visa, MasterCard, Discover accepted. BIG APPLE HERPETOLOGICAL, P.O. Box 632, New York NY 10023.

Free to excellent home: beautiful 1-year-old green iguana, vet checked, very healthy and beautiful. Comes with 29-gallon tank, Vita-Lite, tank cover, ceramic heat lamp and rock bowls. Leave message, (312) 348-4651.

Pet-sitting service: Complete in-home pet and plant care, specializing in reptiles and other unique pets. Dogs and cats welcome with open arms, midday dog walking. Experienced and dependable service by devoted animal lovers, serving Chicago and suburbs, reasonable prices, fully insured and bonded. Ask about our habitat consultation and custom-made cages. Exotics & More, (312) 728-5457 or page us at (708) 750-3688.

Software: **TRACS**™—Total Reptile and Amphibian Control System. The most complete database and reporting solution for automating your breeding records. Perfect for hobbyists, commercial breeders and institutions. Only $129. IBM PCs and compatibles. For more information or ordering contact Marcia Rybak at Leapin' Lizards, 736 N. Western Avenue, #315, Lake Forest IL 60045, (708) 735-8205 phone or (708) 735-8206 fax.

Tours: Five-day South Carolina herp and fossil tours, April–November 1995. Mini expeditions in search of 30-million-year-old turtles and crocodilians; living reptile hunts (vipers, king and rat snakes, turtles, anoles, broadhead and five-lined skinks, treefrogs and other amphibians), exotic reptile shopping and camping in a black water swamp forest. Finest Charleston hotels beginning and end of each tour. Twelve people per tour. Family plans available. $489. For reservations call Steve Faust, (800) 894-TOUR.

Tours: Custom-designed tours to Costa Rica, Panama, Belize and Guatemala. Expeditions to fit the specialized needs of herpers, photographers, educators, writers, professionals in search of data, and travelers just interested in visiting these countries (with or without their families). From $649. Steve Faust, (800) 894-TOUR.

Wanted: I am looking for current and back issues of herpetology-related magazines, symposia, journals and newsletters from around the world, including the U.S., England, Europe, Australia, Africa, etc. Joel, (814) 724-8351. [PA]

Wanted: two female Herrmann's tortoises (*Testudo hermanni*). Lynn Dickason, (918) 747-7523 (o) or (918) 742-3449 (h). [OK]

Wanted: *Uromastyx acanthinurus*, *U. benti* and *U. ocellatus*. Randy Gray, (817) 613-1242 evenings Central Time. [TX]

Wanted: male Baja kingsnake, *conjuncta* phase. Richard Reihl, (803) 537-6915. [SC]

Wanted: brilliant yellow *Lampropeltis getula* "*brooksi*", *L. g. sticticeps*, 85% yellow or more banana *L. g. californiae*, 60% white or more desert phase *L. g. californiae*, high yellow examples of *L. g. holbrooki*, red/orange and black *L. g. goini*, and black & white specimens of *L. g. goini* such as the animal pictured on plate 590 in the Audubon Society field guide. Will pay cash or trade my quality *Lampropeltis getula* ssp. hatchlings for the animals I want. Kirk Setser, 414 Wickham Road, Manhattan KS 66502, (913) 537-9449.

Wanted: Captive breeders for the Texas International Reptile Trade Show, May 27, 1995. Dr. Brian Kimball, Upscale Reptile, (214) 256-3098.

Wanted: drawings and stories about turtles, terrapins and tortoises for publication in new newsletter. Tortoise Shell, P.O. Box 8181, Flint MI 48501.

Wanted: styrofoam boxes, any size or shape so long as they're not flimsy, preferably with cardboard liners, willing to pay from $2 to $5. Bring to CHS meetings. Scott J. Michaels, D.V.M, Serpent City, (815) 363-0290.

Wanted: the CHS Book Service is always in need of styrofoam "peanuts" for packaging shipments. Don't discard them; recycle by bringing them to Joan Moore at any monthly meeting.

Line ads in this publication are run free for CHS members — $2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (312) 588-0728 evening telephone or (312) 782-2868 fax.

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ARAV CONFERENCE IN SACRAMENTO

The Second Annual Conference of the Association of Reptile and Amphibian Veterinarians will be held at the Radisson Hotel in Sacramento, California, 26–29 October 1995. Herpetoculturists, professional herpetologists, veterinarians and students are invited to attend. The conference will include scientific papers, wet labs/workshops and a trip to the Sacramento Zoo. For conference registration information contact Wilbur Amand, VMD, P.O. Box 605, Chester Heights PA 19017, (215) 387-2165 fax.

A HERP'S EYE VIEW OF COSTA RICA

Holbrook Travel, Inc., is arranging a tour, "A Herp's Eye View of Costa Rica," July 1–13, 1995. The tour will be led by William Greenhood, of the Biological Sciences faculty at Santa Fe Community College in Gainesville, Florida. For more details you can call (800) 451-7111.

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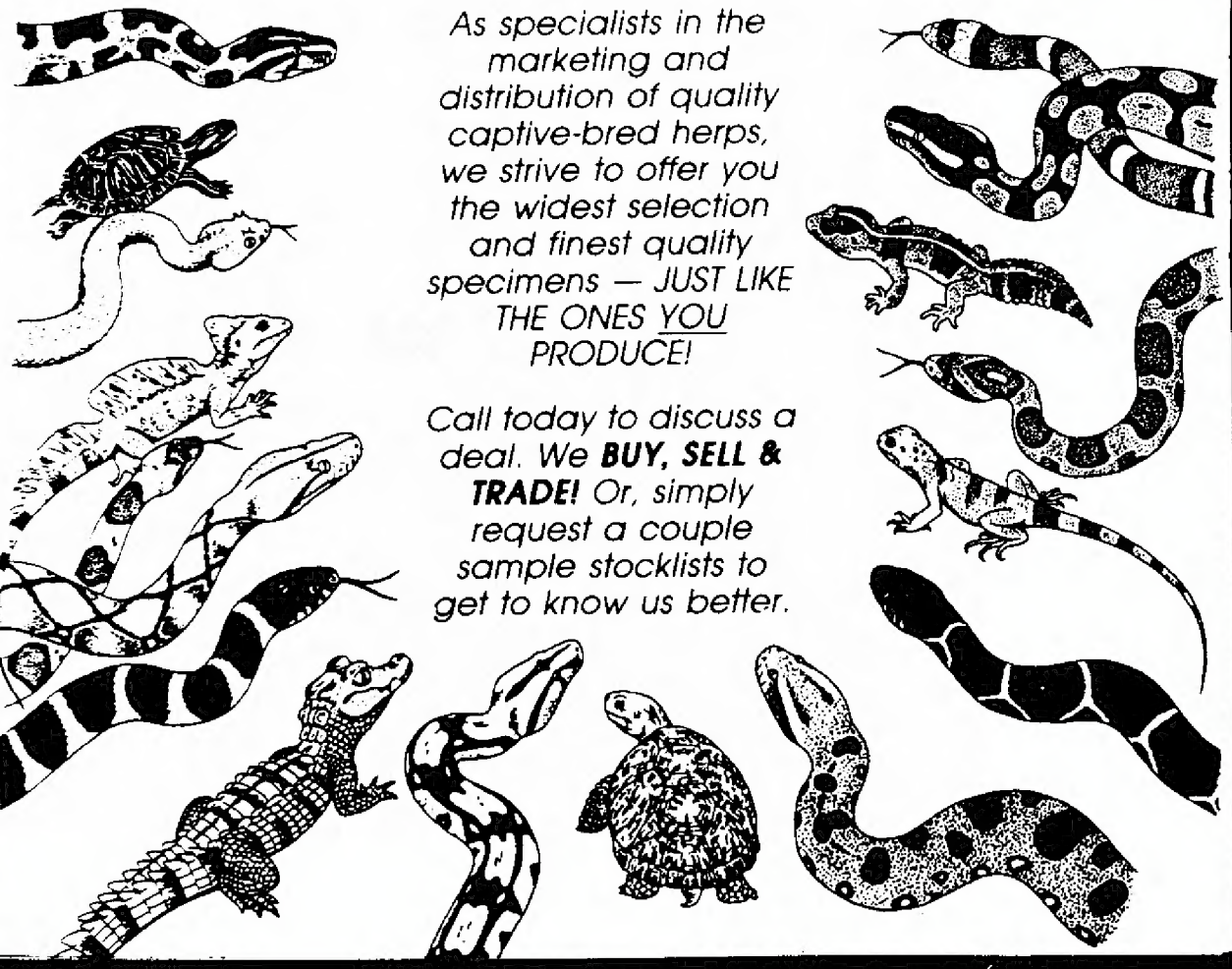

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CHICAGO HERPETOLOGICAL SOCIETY LIBRARY

THE LIBRARY CART WILL BE ACCESSIBLE TO ALL MEMBERS AT EACH MEETING.

MEMBERS MUST SHOW THEIR CHS CARD IN ORDER TO CHECK OUT BOOKS (LIMIT 3).

ALL BOOKS ARE DUE BACK AT THE NEXT MEETING. BOOKS MAY BE RENEWED BY PHONE OR IN PERSON. BOOKS RETURNED LATE WILL INCUR A FEE OF $2. PER MONTH.

TO RENEW BOOKS BY PHONE CALL JENNIE PICCIOLA AT (708) 418-0729.

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, April 26, at the Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, in Chicago. Our speaker will be **Kevin Muchnick**, a private breeder from Kansas City. Kevin will share his expertise on the care and keeping of the world's longest species of lizard, the crocodile monitor, *Varanus salvator*.

At the **April** meeting the **CHS Shop** will feature state and regional field guides. The closeout of selected T-shirt designs will continue this month, and if sales are as brisk as they were in March, new designs will debut in **May**.

We are required to use the entrance on the west side of the museum. We have permission to use the staff parking lot to the west of the museum. Entrance to this lot is from McFetridge Drive, the wide street just to the south, between the museum and Soldier Field. There is also free parking available in the lot to the north of the museum. The #146 CTA bus goes directly to the museum. Unfortunately, it does not operate after 9:00 P.M. However, after the program anyone needing a ride to a CTA stop will have no trouble finding one—just ask any board member.

Turtle Club

The Chicago Turtle Club will meet Sunday, April 23, 1:00–3:30 P.M., at the Emmerson Park Field House, 1820 W. Granville Avenue, in Chicago.

PARASITOLOGY WORKSHOP MAY 7

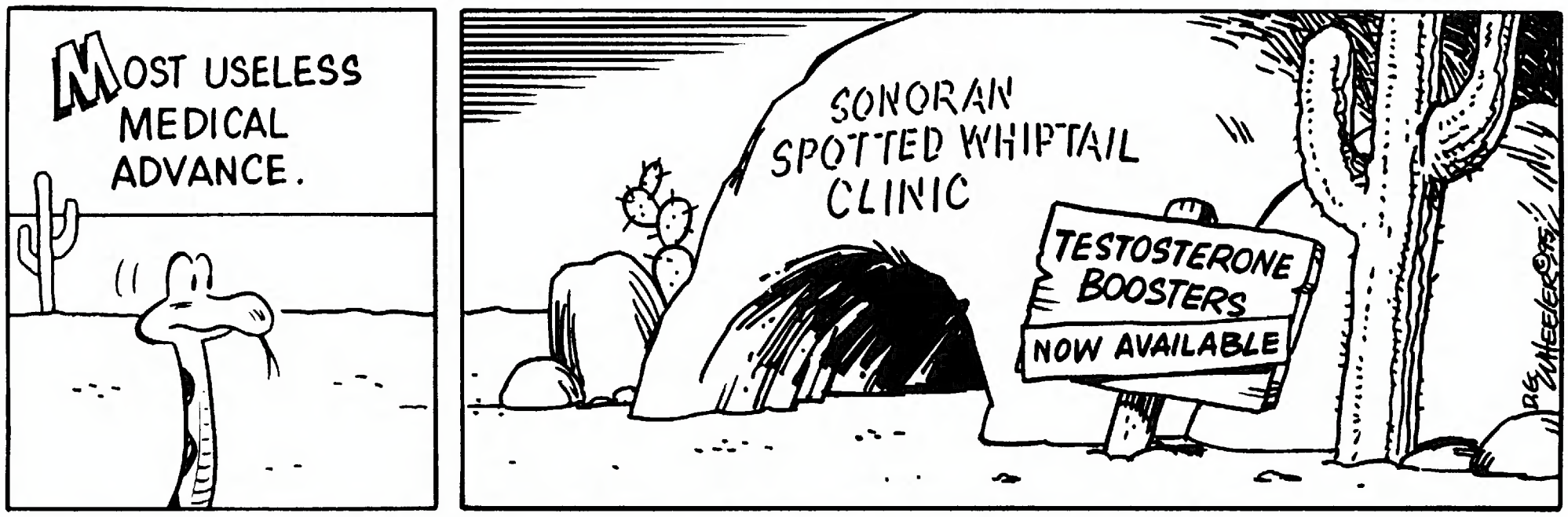
The Chicago Herpetological Society is sponsoring a workshop on parasitology, to be held at the Grove Nature Center in Glenview at Noon on Sunday, May 7. This workshop will be led by Dr. Cheryl Roge of the Vernon Hills Animal Hospital. Participants are encouraged to bring fresh fecal samples (from herps only, please) to be checked for unwelcome inhabitants. Sufficient microscopes will be available so that no more than two persons will have to share each one. The fee for attending is $10. To register or for more information, call Nicole Marrello at (708) 430-3283.

DONATIONS TO THE FEBRUARY 22 RAFFLE

The following is a listing of those individuals and businesses who generously donated items for our monthly raffle at the February 22 meeting. The donated items are shown in parentheses.

Ghann's Cricket Farm (cricket gift certificate); Reptile News Press (*Guide to Reptile Nutrition*, *Guide to Keeping Monitors*, iguana mug); Tetra Terrafauna (Vita Shell); Valentine Equipment (rock cave); ZooMed (hide log, box turtle and tortoise food); Rep-Cal (Rep-Cal); Advanced Vivarium Systems (*The General Care and Maintenance of True Chameleons*); Fancy Publications (subscription to *Reptiles*); Ilene Sievert (turtle pin); Rainbow mealworms (cricket gift certificate); Brian Jones (*Vivarium* magazines, reptile cave and bowls); Neodesha Plastics (baby Neodesha cage); Marcia Rybak (frog pin); Fluker's Cricket Farm (Repta-bedding); Kraig Adler–SSAR (color plates); Big Apple Herpetological Supply (*Bites & Stings*); Mardel Laboratories (Formula C/P); anonymous (endangered animals poster).

THE ADVENTURES OF SPOT



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